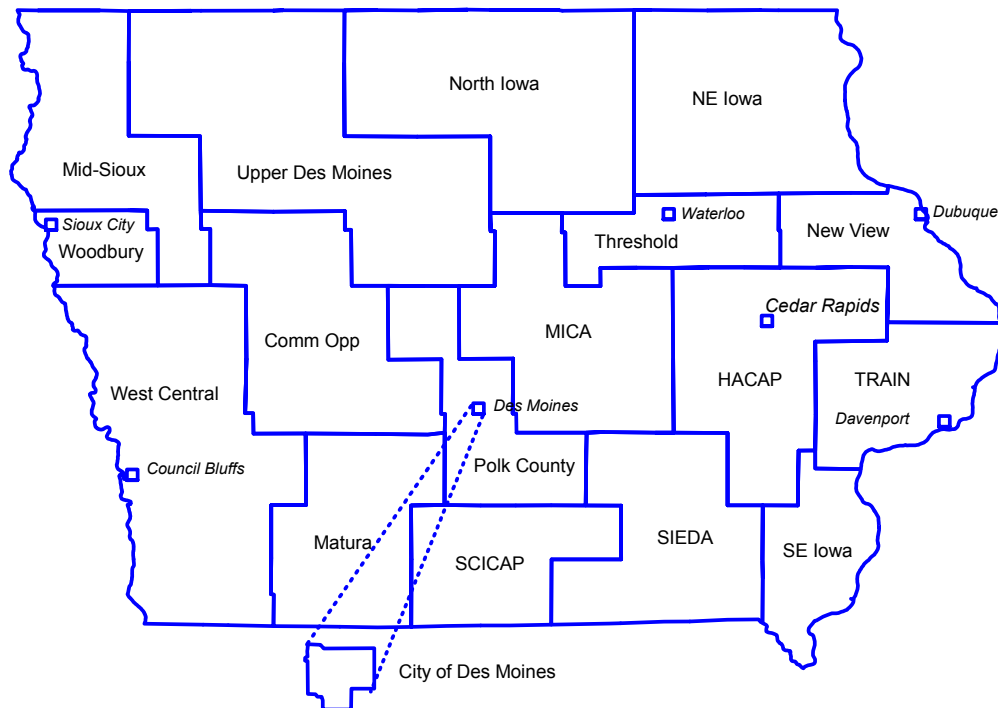


REPORT ON THE IMPACTS AND COSTS OF THE IOWA LOW-INCOME WEATHERIZATION PROGRAM -- Calendar Year 2004

August 18, 2005

Iowa Community Action Agencies



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**Prepared for the
Iowa Statewide Low-Income Collaborative**

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1. EXECUTIVE SUMMARY

This report summarizes state and utility low-income weatherization program activity for dwellings weatherized to completion during calendar year 2004. The report includes state, utility, and agency summaries of calendar year 2004 spending and impacts by measure, end-use, and fuel. The base data consisted of statewide program tracking databases of spending and measure installations maintained by the Iowa Department of Community Action Agencies.

We estimated energy and coincident demand impacts for the program participants by adjustment factors to the engineering estimates that were developed for the 1992 program¹. The gas and electric adjustment factors were derived from a series of fuel consumption analyses, including the 1992 and 1994 program participants. Gas adjustment factors were extended based upon fuel consumption analyses for completions during the period April, 1996 through March, 1997, September, 1998 through August, 1999, January through December, 2000 and 2001, August 2001 to August 2002, and September 2002 to September 2003, and January 2004 through December 2004. Refrigeration measure impacts were adjusted using the results of an electric fuel consumption analysis of January 2002 through December 2002 weatherization clients.

Program Costs and Impacts

The WAP program installed measures in 1,984 dwellings during calendar year (CY) 2004: measures with direct energy savings were installed in all but four of these. Program expenditures for labor, materials, and support increased by 22% compared to expenditures during 2003, totaling \$11,272,585. The average expenditure was \$5,682 per dwelling compared with \$5,064 the previous year.

The measures installed by the program in 2004 are essentially unchanged from the 2003 program with one exception: compact fluorescent bulb installations are no longer limited to six bulbs per house, and the minimum usage threshold was reduced from 3 hours to 1 ½ hours per day.

First-year savings of natural gas totaled 504,519 therms – a 15% increase from 437,603 therms in CY 2003. First-year savings of electricity increased by 13%, to 2,107,645 kWh from the 1,869,400 kWh in the CY 2003 program.

In addition, the CY 2004 program saved 70,652 gallons of propane and fuel oil savings totaled 7,459 gallons.

On average, the program saved 1,068 kWh of electricity for 1,974 dwellings with electricity impacts – this is a 4% increase in the average electricity savings for dwellings with electricity impacts. The program saved an average of 295 therms of natural gas for 1,713 dwellings with gas impacts, a 7% increase over CY 2003 levels. Additionally, the program delivered first-year savings of 287 gallons of propane in 246 dwellings with propane impacts, and 196 gallons of fuel oil in 38 dwellings with fuel oil impacts.

¹ see the following Wisconsin Energy Conservation Corporation reports for a full description of the estimation routines and derivation of the adjustment factors:

- Estimated Low-Income Program Impacts in Iowa, June 14, 1993;
- An Evaluation of Iowa's Low-Income Weatherization Efforts, August 8, 1994; and
- An Evaluation of the 1995 Iowa Low-Income Collaborative Weatherization Program, November 5, 1996.

First-year client energy cost savings totaled \$770,821. The average first-year client fuel bill savings increased substantially, averaging \$389 for dwellings receiving energy savings measures for the CY 2004 program, compared with \$250 per dwelling in 2003. The large increase is attributable to increases in the average energy savings and higher fuel costs.

Utility Expenditures and Impacts

Utility funding totaled \$2,901,146, a 31% increase from CY 2003 funding levels. Utility expenditures averaged \$1,987 for the 1,283 dwellings that received utility-funded measures (65% of all dwellings treated by the program).

These measures were responsible for 44% of all energy savings for electricity and 44% of gas savings achieved by the program. Utility-funded measures yielded first-year client bill savings of \$298,849, averaging \$233 per dwelling that received utility-funded measures. Utility-funded measures saved an average of 843 kWh of electricity for the 1,087 dwellings with utility-funded electricity measures, compared with an average of 690 kWh in 2003. These measures saved 202 therms of natural gas for the 1,095 dwellings with utility-funded natural gas measures compared to an average of 173 therms in 2003. In aggregate, utility-funded measures installed in 2004 reduced peak electricity demand by 173 kW in the summer and 174 kW in the winter, and provided 2,296 peak-day therms of gas savings.

Savings averaged \$79 per dwelling for utility-funded electricity measures, and \$195 for gas measures. Aggregate fuel bill savings increased by 77% year-over-year, and average fuel savings increased by 67%. The large increase in fuel bill savings can be attributed to greater measure expenditures (more measures) per dwelling and increased fuel costs.

Fuel Consumption Analysis Results

The natural gas savings reported herein have been adjusted at the agency level. The adjustment factors were derived from a fuel consumption analysis of recent program participants. The factors were applied to the estimated natural gas, propane, and fuel oil heating measures, and to natural gas and propane water heater measures. Along with providing better assessments of agency-level impacts, this procedure also provides a check on the accuracy of the algorithms used to estimate savings. The fuel consumption analysis showed 25.40% savings \pm 1.3% at 90% confidence for natural gas measures installed in CY 2004.

Changes in Program Delivery and Reporting

Prior to CY04, the WAP program installed no more than six compact fluorescent bulbs per dwelling. Only bulbs with a minimum of three hours of use per day were eligible. The estimated savings were billing-analysis adjusted in a previous evaluation. Starting in CY04, the minimum daily usage was reduced to 1 ½ hours per day. Our algorithms were adjusted to estimate 50% savings for all bulbs installed above the six bulbs per dwelling threshold.

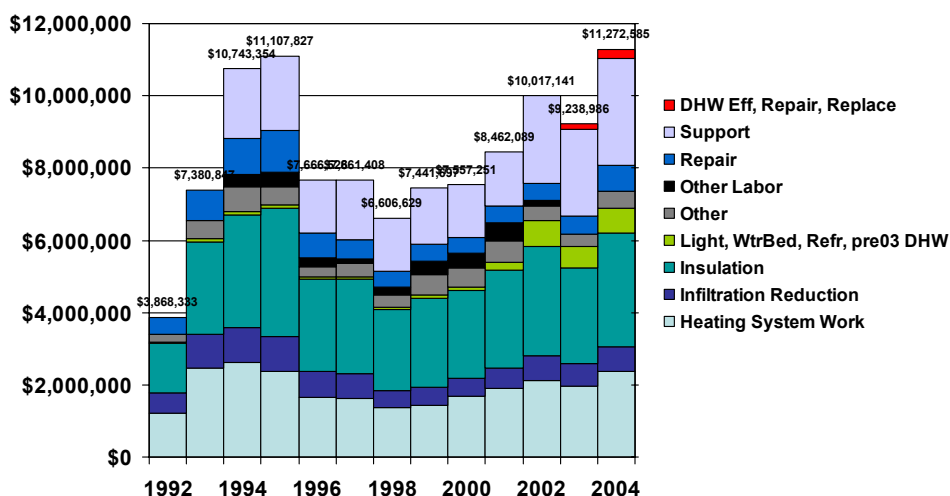
Utilities began funding high-efficiency water heaters replaced for health and safety reasons for the CY 2003 program. We modified the estimated savings for the CY 2004 program to reflect the updates in the appliance efficiency standards for new units installed beginning in January, 2004. We also adjusted the assumptions of efficiency of existing units that reflect the appliance standards instituted in 1991. Finally, we developed estimates for electric water heater replacements (the prior methods were developed specifically for natural gas water heaters).

2. SUMMARY OF PROGRAM IMPACTS AND EXPENDITURES

Aggregate Program Expenditures and Impacts

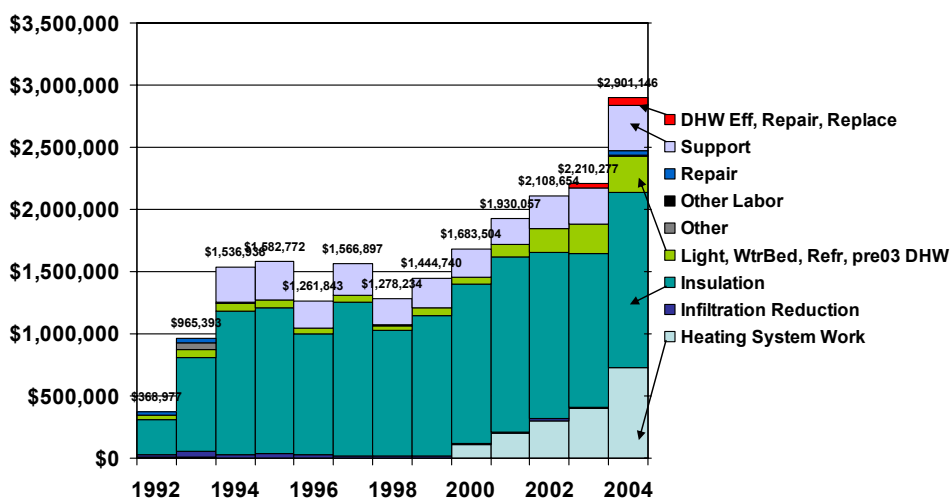
Program spending totaled \$11,272,585 for materials, labor, and support in houses weatherized to completion during calendar year 2004, up by 22% from \$9,236,687 in 2003 (see Figure 2.1a, totals exclude administration expenditures). The number of households weatherized in 2004 increased by 6.2%, from 1,864 in 2003 to 1,984 in 2004.

Figure 2.1a. Overall Program Expenditures



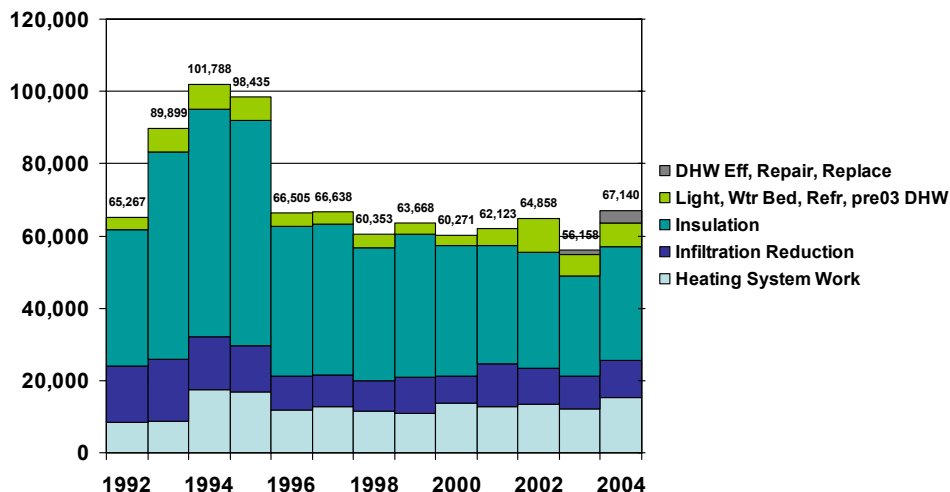
Utility funding totaled \$2,901,146, which represents a 31% increase over \$2,209,638 spent during 2003 (Figure 2.1b). Utility expenditures accounted for 26% of the total low-income program expenditures, up from 24% in 2003.

Figure 2.1b. Utility Expenditures



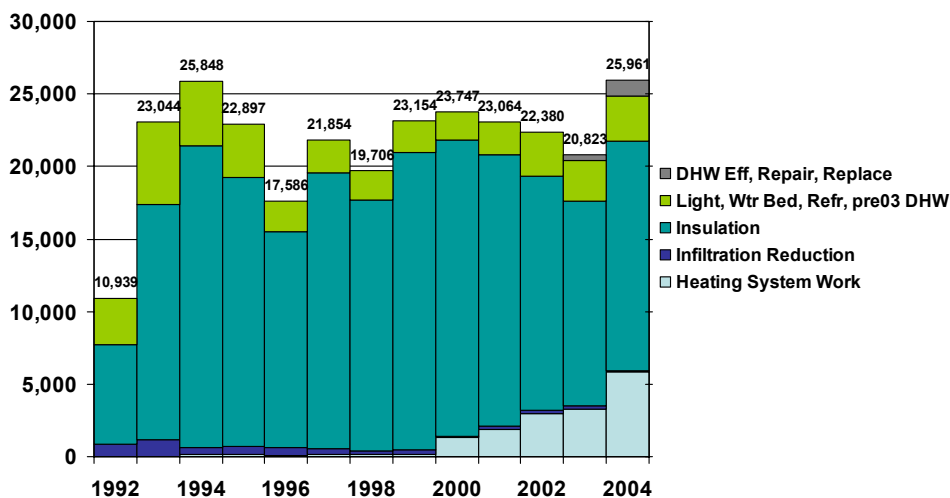
Aggregate program savings increased by 19.6%, from 56,156 MBtu in 2003 to 67,140 MBtu in 2003 (Figure 2.2a.)

Figure 2.2a. Program First Year Savings (MBTU)



Utility-funded energy savings increased by 25%, reversing a three-year decline in year-over-year savings that began in the year 2001 (Figure 2.2b.) Savings totaled 25,961 MBtu in 2004, the highest level since the joint WAP-utility program delivery began in 1992.

Figure 2.2b. Utility First Year Savings (MBTU)



In fuel units, first-year savings totaled 504,519 therms of natural gas, 2,107,645 kWh of electricity, 70,652 gallons of propane, 7,459 gallons of fuel oil. On an Mbtu basis, natural gas savings continues to dominate savings at 77%. Electricity savings accounted for 11% of savings on an Mbtu basis in the CY 2004 program, and propane savings accounted for 10%.

Figure 2.3a Program Savings by End-Use

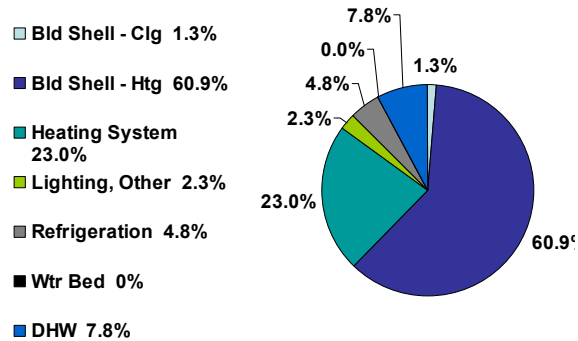
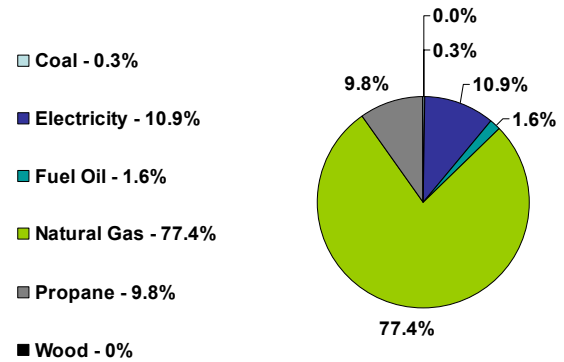


Figure 2.3b Program Savings by Fuel Type



Total nominal first year client energy bill savings increased from \$456,365 in 2003 to \$770,821 during 2004 (Figure 2.4a.) This is driven in part by increases in aggregate savings as well as substantial increases in average fuel costs² (Figure 2.4b.) Electricity prices increased by 21%, gas prices increased by 48%, fuel oil prices increased by 61%, and propane increased by 39%.

Figure 2.4a First Year Client Cost Savings

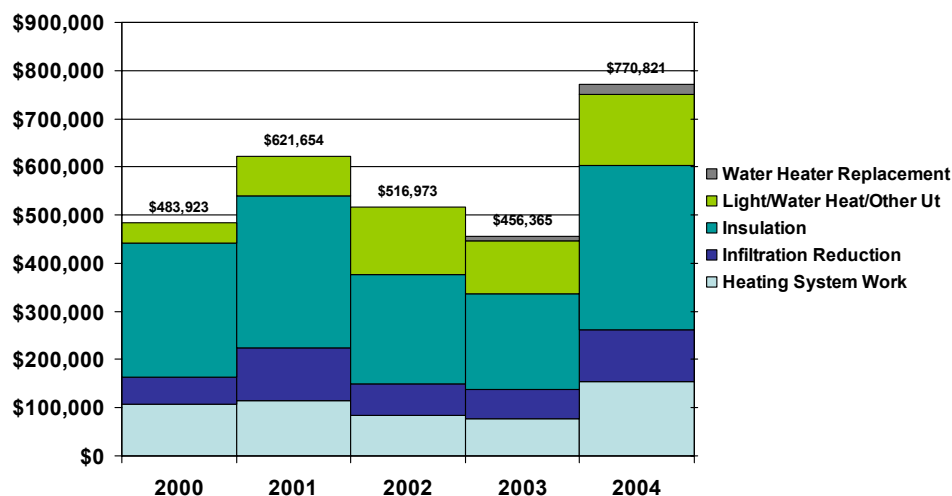
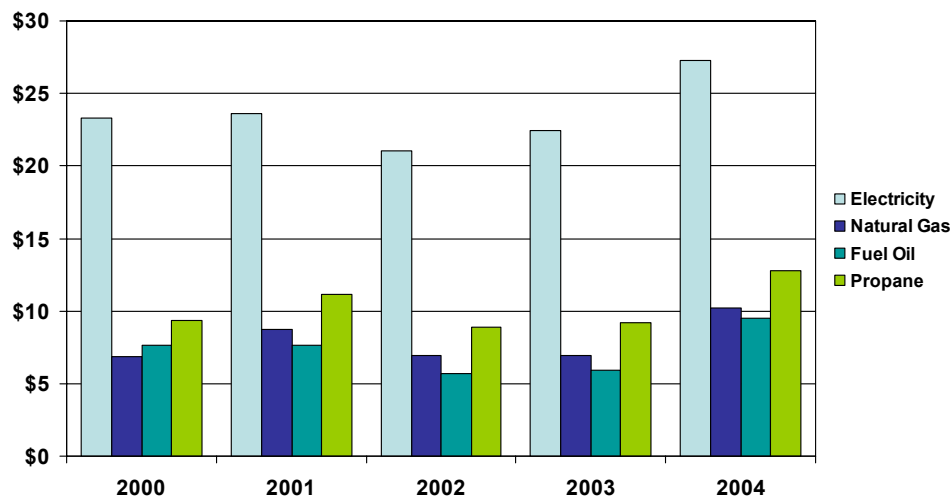


Figure 2.4b Average Fuel Cost (Nominal Dollars per MBTU)



² The average energy prices for electricity and natural gas are provided by the utilities. We use consumption-weighted monthly values for each utility. Prices for fuel oil and natural gas are derived from the Energy Information Center's Winter Fuels Report of weekly prices for Iowa during 2004.

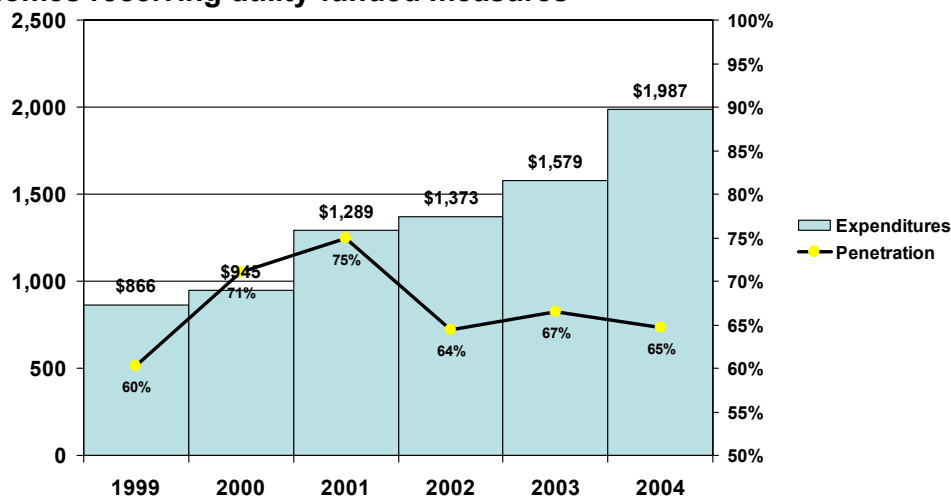
Utility Funding Impacts

Utility funding reached 1,283 households, or 65% of all dwellings treated by the program, down slightly from 67% in 2003. The average utility expenditure for materials and labor was \$1,987 for households receiving these measures: the average increased by 26% from \$1,579 in CY 2003 (Figure 2.5.) Utility support expenditures averaged an additional \$283 per household receiving utility-funded measures.

Utility-funded measures accounted for 39% of MBtu savings in 2004 compared to 37% in 2003. These measures were responsible for 44% of all energy savings for electricity and 44% of gas savings. Utility-funded measures saved an average of 843 kWh of electricity for the 1,087 dwellings with utility-funded electricity measures, compared with an average of 690 kWh in 2003. These measures saved 202 therms of natural gas for the 1,095 dwellings with utility-funded natural gas measures compared to an average of 173 therms in 2003. In aggregate, utility-funded measures installed in 2004 reduced peak electricity demand by 173 kW in the summer and 174 kW in the winter, and provided 2,296 peak-day therms of gas savings.

Utility-funded measures yielded first-year client bill savings of \$298,849, averaging \$233 per dwelling that received utility-funded measures. Savings averaged \$79 per household for utility-funded electricity measures, and \$195 for gas measures. Aggregate fuel bill savings increased by 77% year-over-year, and average fuel savings increased by 67%. The large increase in fuel bill savings can be attributed to greater measure expenditures (more measures) per dwelling and increased fuel costs over CY 2003.

Figure 2.5 Average utility spending and percentage of homes receiving utility-funded measures

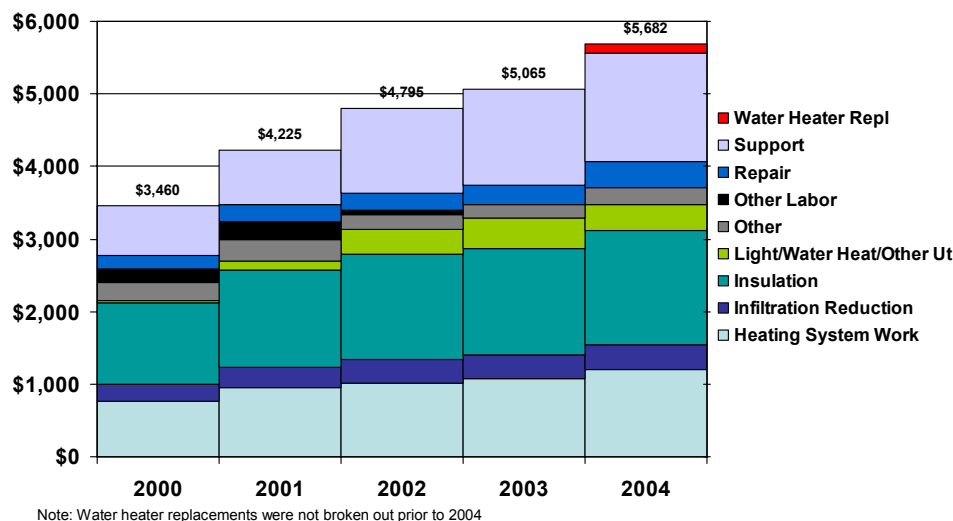


Note: Averages exclude support and administration expenditures

Average Household Expenditures and Impacts

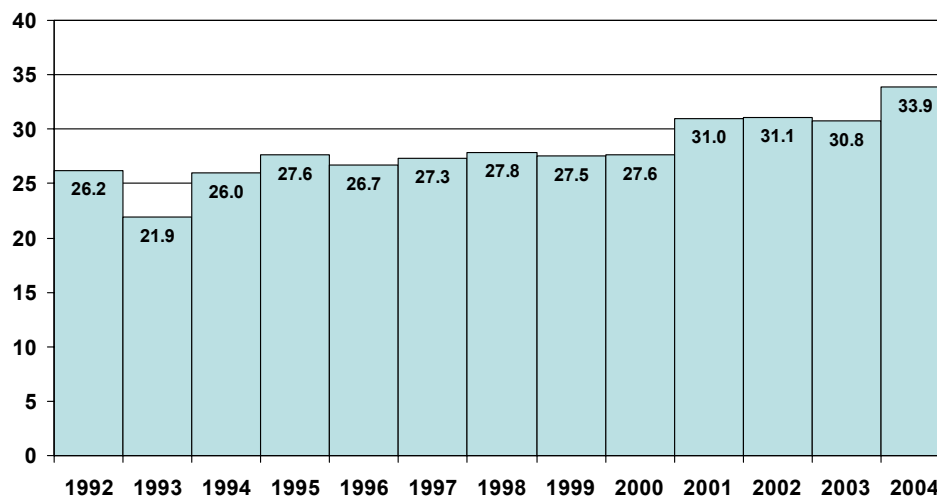
Average household expenditures increased by 12.2% to \$5,682 from \$5,065 in 2003 (Figure 2.6.) Insulation accounted for the largest proportion of total expenditures, followed by support and heating system work.

Figure 2.6 Average program expenditures



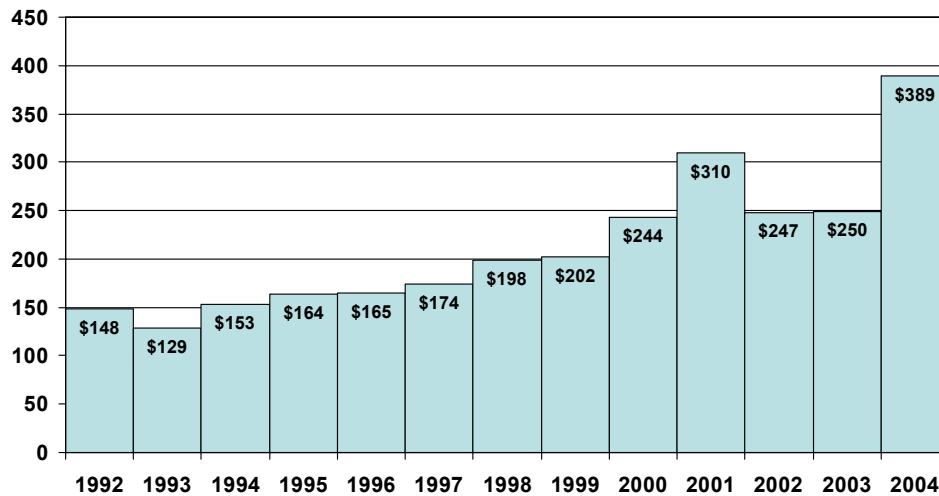
Average dwelling savings increased to 33.9 MBtu for clients weatherized during 2004, representing a 10% increase over the previous year (Figure 2.7). This is also the highest average savings on record for the collaborative low-income program.

Figure 2.7 Average annual energy savings per dwelling (MBTU)



First-year client fuel bill savings were \$389 for dwellings receiving energy savings measures for the CY 2004 program, compared with \$250 per dwelling in 2003 (Figure 2.8). The large increase is attributable to increases in the average energy savings and higher fuel costs (Figure 2.4b).

Figure 2.8 Average annual client fuel bill savings (nominal dollars)



The majority of client energy cost savings is attributable to space heating and heating system measures savings, which together account for 75% of savings (Figure 2.9a.) Refrigeration measures accounted for 11% of the energy cost savings. Natural gas savings represent the bulk of client bill savings at 62%, followed by electricity at 25% (Figure 2.9b.).

Figure 2.9a Client bill savings by end-use

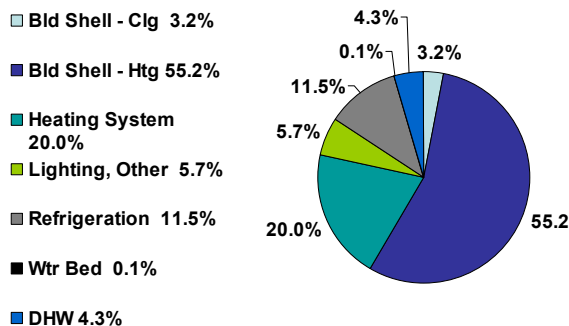


Figure 2.9b Client bill savings by fuel type

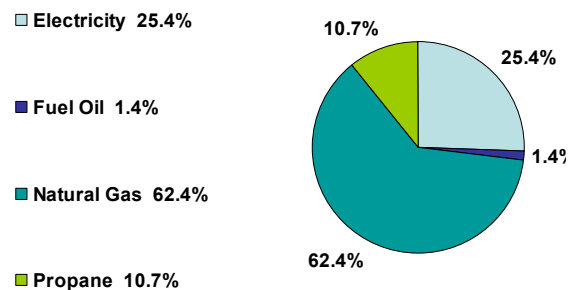
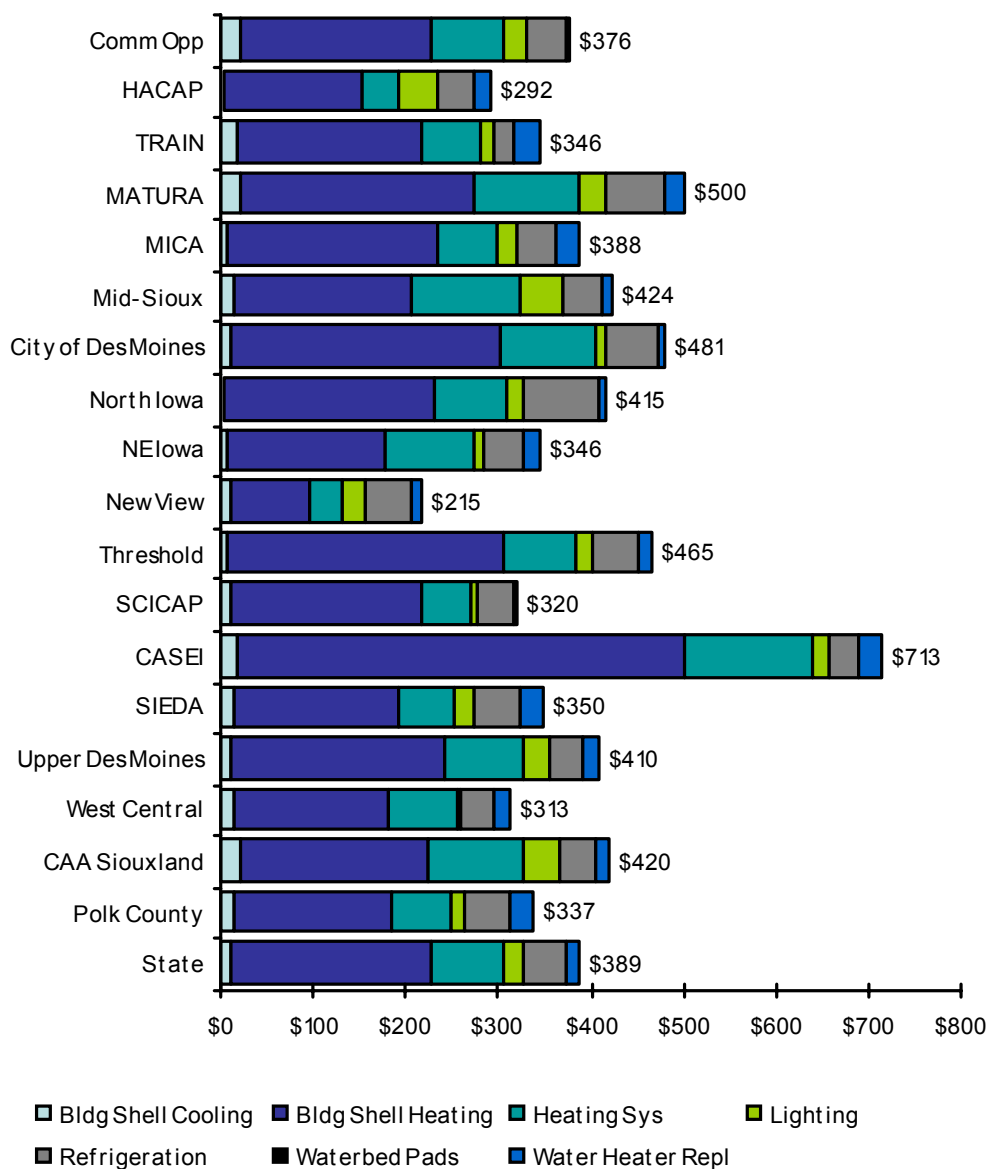


Figure 2.10 shows the average annual energy cost savings by agency. The series are arranged from left to right in the chart according to left to right and top to bottom and in the legend, e.g., Bldg Shell Cooling, then Bldg Shell Heating, then Heating system, etc.

The natural gas savings attained by each agency were adjusted according to results of the natural gas fuel consumption analyses (see Section 3, Assessment of Agency-Specific Adjustment Factors). A fuel consumption analysis was not run for electricity or deliverable fuels (propane, fuel oil, and other fuels).

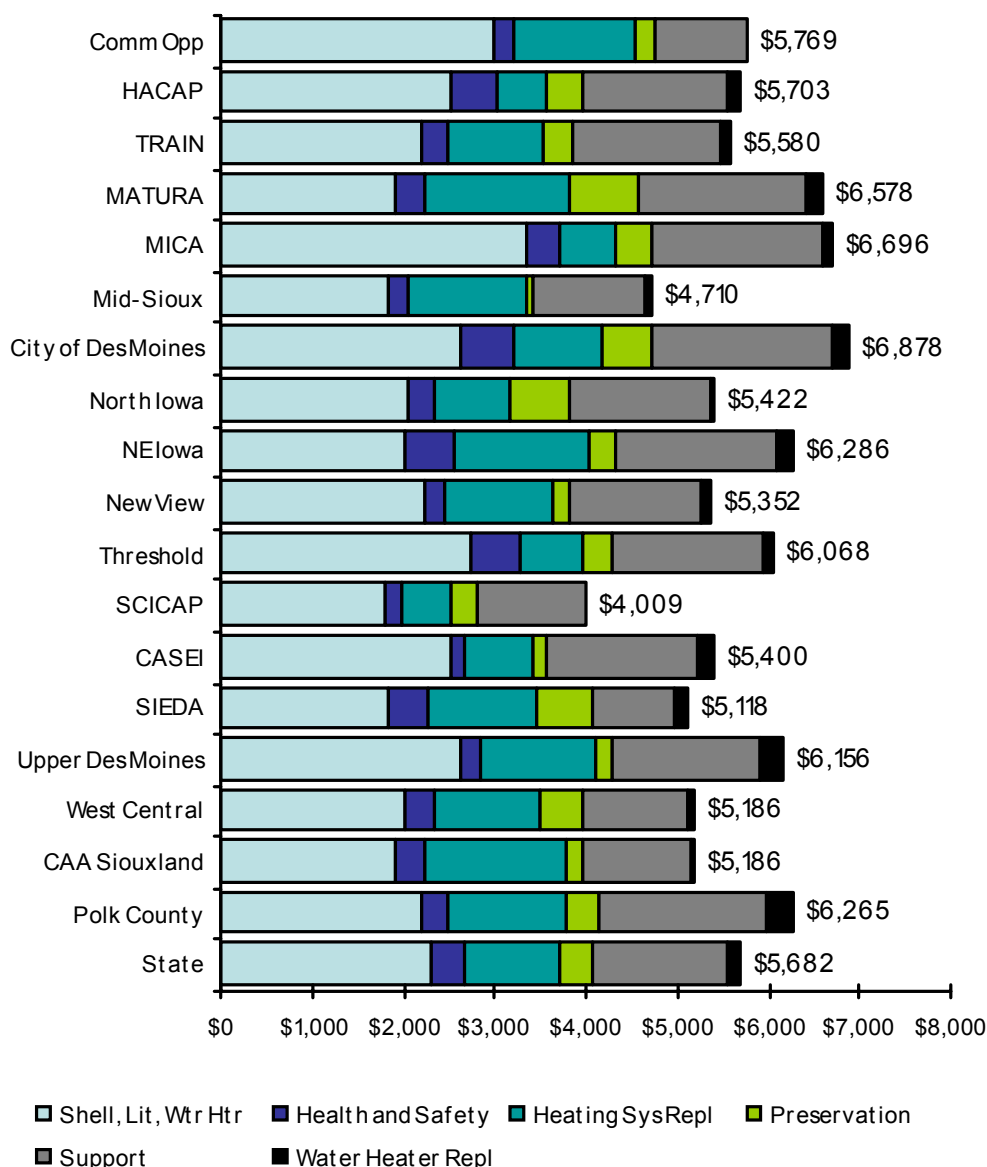
Figure 2.10. Average annual energy cost savings per dwelling



The average first-year client bill savings was widely varied across agencies, from lows of \$215 per dwelling (New View) to a highs of \$713 for CASEI (formerly known as SE Iowa). Note that a number of factors affect the values shown in this chart, factors beyond quality or intensity of weatherization treatment. Consequently, these results should not be used as a basis for comparing the quality, attention to detail, dedication, or other factors of agency performance.

Figure 2.11 shows the average expenditures for all households in 2004. MATURA, MICA, and City of Des Moines each averaged over \$6,500 per dwelling. SCICAP's average expenditures was lowest at \$4,009. North Iowa experienced a substantial increase for the second year: \$5,422 in CY 2004 compared with \$3,995 in CY 2003 and \$2,967 in CY 2002. The statewide average expenditure was \$5,682 per dwelling.

Figure 2.11 Average spending per dwelling

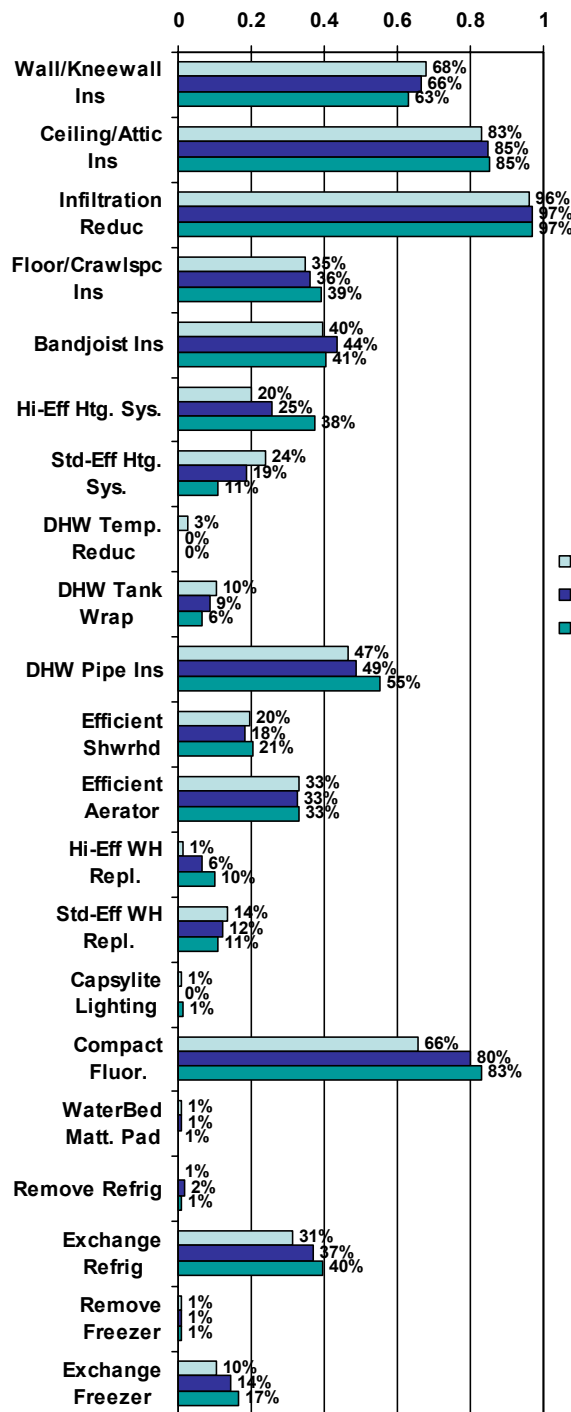


The average installation rates, costs, and savings for energy efficiency measures for 2002-2004 are shown in Figures 2.12a and 2.12b.

Heating system replacements were installed in 49% of dwellings weatherized in CY 2004, up from 44% in the previous two years. High-efficiency heating system installation rates continue to increase relative to standard-efficiency units: 78% of heating systems replacements were high-efficiency in CY 2004

compared with 57% in CY 2003. Refrigeration appliance exchanges continued to increase in CY 2004: 40% of dwellings received refrigerator exchanges and 17% received freezer exchanges. Water heater replacement rates also increased for the third year: 21% of dwellings received a replacement in CY 2004.

Figure 2.12a Installation Rate



Average Cost

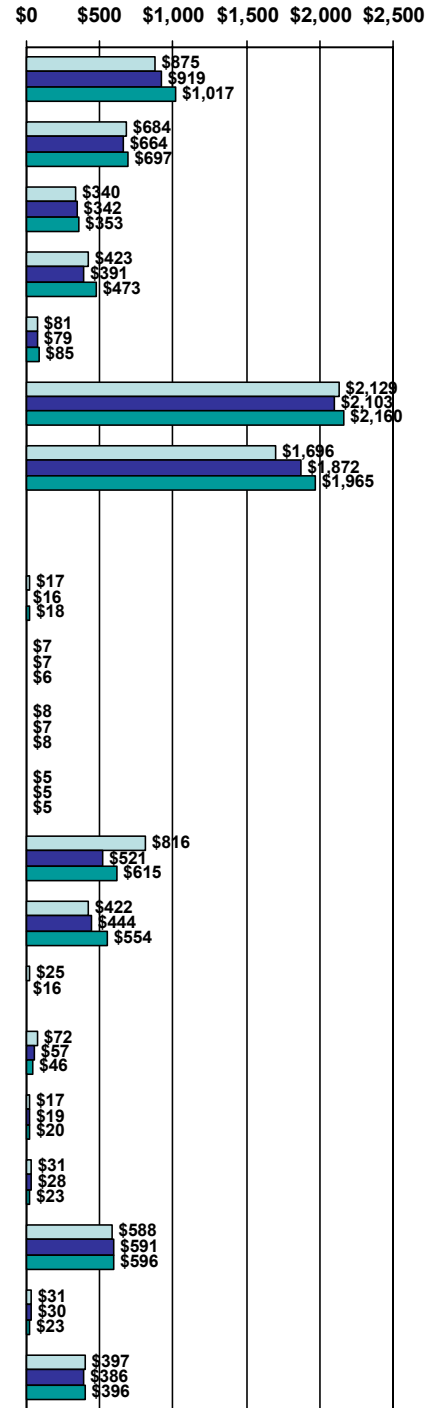
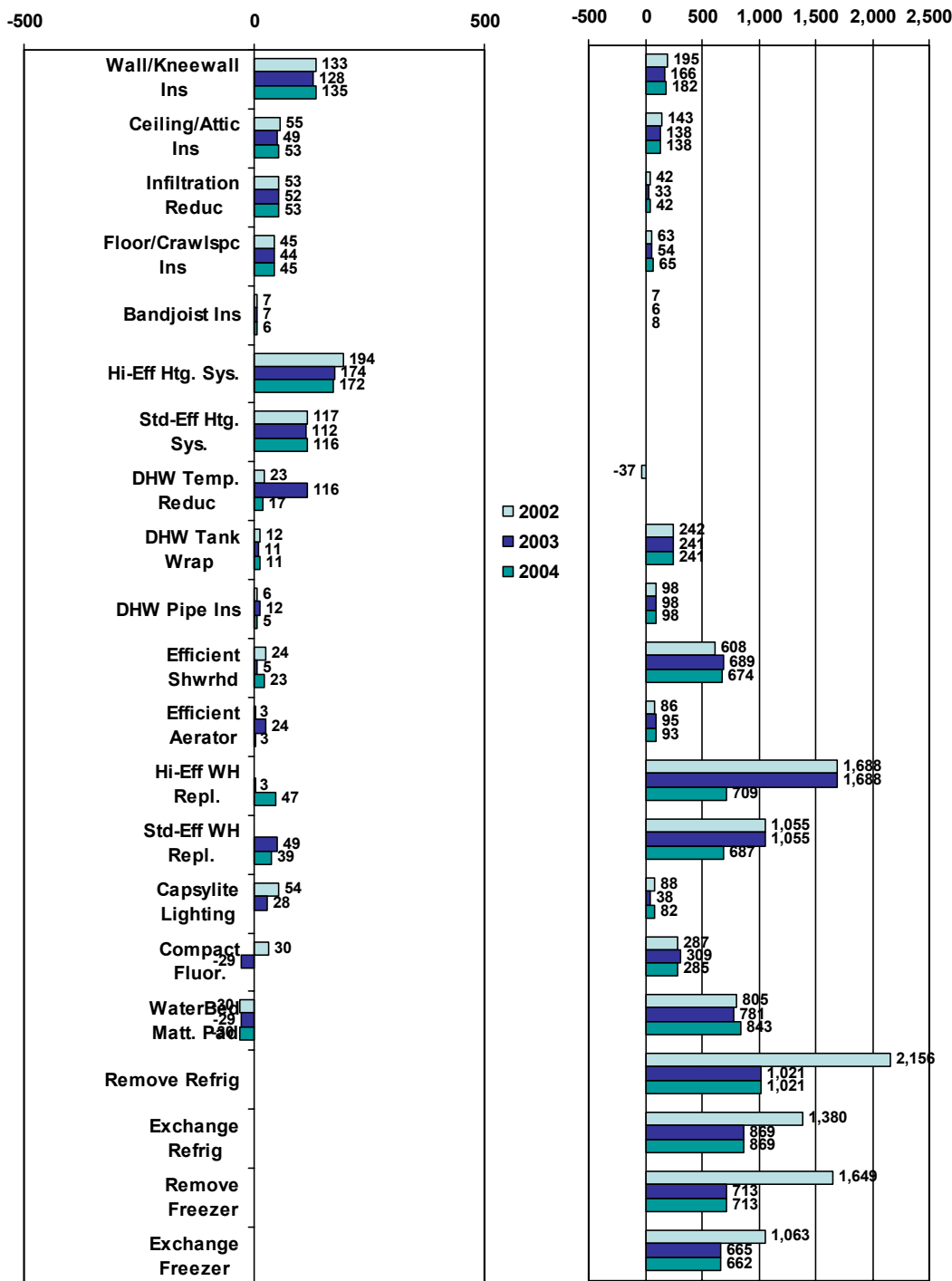


Figure 2.12b Average Gas Savings (therms) Average Electricity Savings (kWh)



The average energy savings (Figures 12b) changed little year-over-year for most measures. Note that for 2003 and 2004, the average savings for refrigeration measures reflects the billing analysis adjustments to savings: the CY 2001 and 2002 estimates were based upon average savings from the pilot program which targeted dwellings with high electricity consumption. Also, the estimated water heater replacement

savings declined during the CY 2004 year due to changes in assumptions of the efficiency of existing units and adjustments for new appliance efficiency standards that went into effect in January, 2004. Appendix B details changes to these algorithms.

Table 2.1 provides a detailed listing of the average installation rates of all measures, from 1992 through 2004. As noted earlier, the installation rates have changed very little for most major heating/cooling measures, except high efficiency and water heater replacements.

Table 2.1. Percentage of houses receiving measures

Measure	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<i>Insulation and Infiltration Reduction Measures</i>													
Wall/Kneewall Insulation	48	53	52	57	59	59	56	51	53	63	68	66	63
Ceiling/Attic Insulation	73	72	71	72	72	73	72	69	74	82	83	85	85
Infiltration Reduction	87	86	82	84	86	87	89	84	82	97	96	97	97
Floor/Crawlspace Insulation	30	29	30	32	34	33	32	29	30	33	35	36	39
Bandjoist Insulation	44	42	41	42	43	41	39	32	35	43	40	44	41
Damming Material	Na	Na	Na	Na	Na	5	24	28	31	33	0	0	0
Unspecified Insulation	14	3	0	0	14	38	52	60	67	76	73	74	72
<i>Heating System Measures</i>													
Htg. Sys. Replacement	26	21	26	28	30	33	31	29	39	44	44	44	49
High Eff Htg Sys Repl	Na	Na	Na	5	4	6	7	5	8	18	20	25	38
Std/Unspec Eff Htg Sys Repl	Na	Na	Na	23	26	26	24	24	31	26	24	19	11
Htg. Sys. Tune and Clean	61	63	63	64	66	61	59	53	52	63	62	62	57
Heating System Safety Check	Na	Na	33	46	47	45	55	55	60	25	35	28	29
Htg. Sys. Other	35	59	37	37	31	30	29	15	7	25	43	46	43
Duct Insulation	Na	Na	1	2	2	3	2	2	2	2	0	0	0
Duct Sealing	Na	Na	41	30	26	22	20	23	23	28	58	57	56
<i>Water Heater Measures</i>													
Water Heater Turndown	11	7	11	11	11	9	10	4	3	3	3	0	0
Water Heater Wrap	18	20	26	27	21	14	15	12	10	13	10	9	6
Pipe Wrap	24	27	41	49	43	40	44	38	40	46	47	49	55
Shower Head	12	16	22	23	20	18	19	18	14	23	20	18	21
Faucet Aerator	23	30	41	43	33	30	31	27	27	32	33	33	33
Water Heater Replacement											15	19	21
Std-Eff Wtr Htr Repl.											14	12	11
Hi-Eff Wtr Htr Repl.											1	6	10
Water Heater Repair	11	5	10	23	20	14	11	14	20	18	7	13	15
<i>Lighting Measures</i>									53	63	66	80	83
Capsylite Bulbs	15	16	18	15	14	13	11	7	8	8	1	0	0
Compact Fluorescent Bulbs	13	25	24	28	24	28	31	39	47	55	66	80	80
<i>Water Bed Mattress Pads</i>													
	Na	Na	2	5	4	3	1	2	2	2	1	1	1
<i>Refrigeration Measures</i>													
										14	36	44	47
Refrigerator Removal	Na	Na	Na	Na	Na	Na	Na	Na	Na	1	1	2	1
Refrigerator Exchange	Na	Na	Na	Na	Na	Na	Na	Na	Na	9	31	37	40
Freezer Removal	Na	Na	Na	Na	Na	Na	Na	Na	Na	0	1	1	1
Freezer Exchange	Na	Na	Na	Na	Na	Na	Na	Na	Na	3	10	14	17
<i>Health and Safety (other than heating & water heating measures listed above)</i>													
Asbestos Abatement	Na	Na	2	0	0	1	1	0	0	0	0	1	1
CO Detector	Na	Na	Na	1	4	15	22	24	29	33	30	34	37
Smoke Detector	Na	Na	0	1	2	3	4	5	7	0	6	9	11
Exhaust Ventilation	Na	Na	1	2	26	36	36	35	38	57	47	48	51
Fuses	Na	Na	Na	Na	Na	0	1	0	0	0	0	0	0
<i>Support and Evaluator/Inspector Labor</i>													
Evaluator Labor	Na	Na	52	60	69	38	44	82	91	94	30	Na	Na
Inspector Labor	Na	Na	39	57	64	33	50	74	84	94	29	Na	Na
Evaluator/Inspector Labor	Na	Na	Na	Na	Na	Na	Na	Na	Na	1	0	Na	Na
Support	Na	Na	95	97	97	98	98	98	98	100	99	94	94
<i>Other</i>													
Repairs	82	83	76	80	80	75	73	68	70	80	80	85	86
Consumables	43	41	31	32	36	31	36	28	27	20	26	26	24
Unknown	1	12	11	0	0	0	0	5	3	1	1	1	0

Note: Refrigeration measures were phased in beginning the second half of 2001.

Savings of Water Heater, Lighting, and Refrigeration Measures

Table 2.2 shows the installation rates for energy efficiency measures not specifically addressed by the NEAT audit as used in Iowa. These measures include water heater (except water heater replacements which are primarily health and safety measures), lighting, waterbed mattress pads, and refrigeration measures.

Statewide, client bill savings averaged \$74 for these measures: this is up from \$61 in CY 2003.

The highest average bill savings were attained by North Iowa at \$103 per dwelling. SCICAP showed the lowest average bill savings for these measures, at \$48. North Iowa, which had the lowest savings the previous year (\$40), showed a notable improvement to \$53 per dwelling, but still remains among the lowest in the state.

Table 2.2 Installation rates of non-space-conditioning measures

Agency	Water Heater Measures					Lighting		Waterbed Mattress Pad	Refrigeration				Average First Year Bill Savings
	Tank Wrap	Pipe Wrap	Eff Shower- head	Eff Faucet Aerator	Temp Reduc	Cap- sylvite	Compact Fluor		Ex- change Refrig	Ex- change Freezer	Remove Refrig	Remove Freezer	
Comm Opp	0%	98%	9%	0%	0%	0%	70%	0%	34%	11%	11%	2%	\$70.33
HACAP	4%	36%	25%	42%	0%	0%	99%	1%	46%	13%	1%	1%	\$90.65
TRAIN	39%	61%	48%	81%	0%	0%	100%	0%	26%	5%	0%	0%	\$52.01
Matura	0%	0%	0%	0%	0%	0%	85%	0%	55%	23%	5%	3%	\$92.70
MICA	0%	78%	44%	66%	0%	0%	95%	12%	41%	13%	0%	0%	\$84.21
Mid-Sioux	26%	23%	0%	0%	0%	0%	95%	0%	28%	23%	11%	8%	\$94.95
City of Des Moines	1%	41%	2%	3%	0%	0%	12%	0%	58%	15%	6%	1%	\$65.46
North Iowa	0%	2%	0%	2%	0%	0%	82%	0%	29%	23%	0%	2%	\$102.93
NE Iowa	9%	85%	2%	7%	0%	0%	92%	0%	35%	24%	4%	2%	\$53.37
New View	6%	3%	1%	1%	0%	0%	97%	0%	43%	10%	0%	4%	\$82.72
Threshold	0%	86%	0%	0%	0%	0%	84%	0%	42%	12%	0%	0%	\$69.44
SCICAP	0%	17%	0%	0%	0%	0%	54%	0%	48%	15%	2%	0%	\$47.51
CASEI	0%	0%	0%	0%	0%	0%	88%	0%	33%	16%	0%	0%	\$50.79
SIEDA	7%	79%	41%	72%	0%	0%	87%	1%	38%	14%	0%	0%	\$84.63
Upper Des Moines	0%	44%	0%	42%	1%	0%	92%	0%	37%	0%	0%	0%	\$65.05
West Central	5%	69%	36%	79%	1%	0%	52%	0%	24%	16%	0%	0%	\$54.09
CAA Siouxland	39%	82%	35%	0%	0%	0%	91%	0%	36%	27%	2%	2%	\$96.52
Polk County	0%	95%	31%	76%	0%	0%	64%	0%	51%	24%	0%	0%	\$72.54
State	9%	51%	18%	34%	0%	0%	81%	1%	38%	14%	2%	1%	\$74.32

(1) First-year household bill savings are averages of total water heater, lighting, and waterbed mattress pad savings for

Table 2.3 shows details of the average installed costs for each measure (average costs are computed for households that received the specific measures, not across all households treated by the program.) The average installed costs of major measures tended to increase by a few percent year-over-year.

Table 2.3. Average measure costs

Measure	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<i>Insulation and Infiltration Reduction Measures</i>													
Wall/Kneewall Insulation	449	537	668	805	807	819	826	846	831	871	875	919	1017
Ceiling/Attic Insulation	338	370	438	516	522	543	558	573	592	631	684	664	698
Infiltration Reduction	264	264	285	317	337	310	248	264	281	294	340	342	353
Floor/Crawlspace Insulation	127	150	274	332	365	315	350	408	407	421	423	391	474
Bandjoist Insulation	45	55	63	66	68	71	75	79	77	82	81	79	85
Damming Material	Na	Na	Na	Na	Na	29	35	34	28	28	0	0	0
Unspecified Insulation	211	165	151	10	142	121	129	143	140	144	146	142	166
<i>Heating System Measures</i>													
Htg. Sys. Replacement	1,549	1,894	1,973	1,840	1,720	1,665	1,739	1,809	1,815	2,470	1,893	1,989	2,058
High Eff Htg Sys Repl	Na	Na	Na	1,706	2,213	1,929	1,830	2,059	1,959	2,063	2,129	2,103	2,160
Std/Unspec Eff Htg Sys Repl	Na	Na	Na	2,418	1,641	1,604	1,712	1,751	1,781	1,727	1,696	1,872	1,965
Htg. Sys. Tune and Clean	65	78	88	86	76	73	77	80	75	77	82	80	81
Heating System Safety Check	Na	Na	101	74	46	50	53	119	144	266	69	75	97
Htg. Sys. Other	130	161	172	182	210	229	248	326	251	266	281	269	257
Duct Insulation	Na	Na	90	107	103	105	125	74	100	76	0	0	0
Duct Sealing	Na	Na	219	165	157	149	126	156	142	153	96	83	79
<i>Water Heater Measures</i>													
Water Heater Turndown	0	0	0	0	0	0	0	0	0	0	0	0	0
Water Heater Wrap	16	19	22	20	18	20	19	19	18	18	17	16	18
Pipe Wrap	6	5	7	8	6	6	6	7	6	7	7	7	6
Shower Head	6	7	8	8	8	9	8	8	7	29	8	7	8
Faucet Aerator	4	4	8	7	5	6	5	5	5	5	5	5	5
Water Heater Replacement													
Std-Eff Wtr Htr Repl.				Combined with water heater repair							422	444	554
Hi-Eff Wtr Htr Repl.											816	521	615
Water Heater Repair	355	360	162	170	148	224	252	265	240	328	85	137	143
<i>Lighting Measures</i>													
Capsylite Bulbs	23	21	22	24	23	24	25	22	22	25	16	0	0
Compact Fluorescent Bulbs	15	20	23	27	41	47	70	66	58	62	74	48	48
<i>Water Bed Mattress Pads</i>	Na	Na	2	5	4	3	1	2	2	2	17	19	20
<i>Refrigeration Measures</i>													
Refrigerator Removal	Na	Na	Na	Na	Na	Na	Na	Na	Na	43	31	28	23
Refrigerator Exchange	Na	Na	Na	Na	Na	Na	Na	Na	Na	589	588	591	596
Freezer Removal	Na	Na	Na	Na	Na	Na	Na	Na	Na	40	31	30	23
Freezer Exchange	Na	Na	Na	Na	Na	Na	Na	Na	Na	410	397	386	396
<i>Health and Safety (other than heating & water heating measures listed above)</i>													
Asbestos Abatement	Na	Na	307	1,139	729	500	529	648	0	0	849	772	735
CO Detector	Na	Na	Na	44	60	60	56	55	51	50	53	53	53
Smoke Detector	Na	Na	110	20	38	27	31	33	25	0	25	29	31
Exhaust Ventilation	Na	Na	42	53	66	65	74	73	79	187	89	116	128
Fuses	Na	Na	Na	Na	Na	21	35	35	28	0	23	33	20
<i>Support and Evaluator/Inspector Labor</i>													
Evaluator Labor	Na	Na	111	100	84	88	114	105	111	132	151	Na	Na
Inspector Labor	Na	Na	70	89	78	72	104	91	99	120	95	Na	Na
Evaluator/Inspector Labor	Na	Na	Na	Na	Na	Na	Na	Na	Na	440	0	Na	Na
Support	Na	Na	501	580	606	672	709	690	699	754	1,178	1,405	1,584
<i>Other</i>													
Repairs	235	244	319	381	342	287	298	292	279	296	275	318	420
Consumables	29	31	42	25	29	23	27	13	15	14	16	20	25

Figure 2.13 Installation Rates by Month

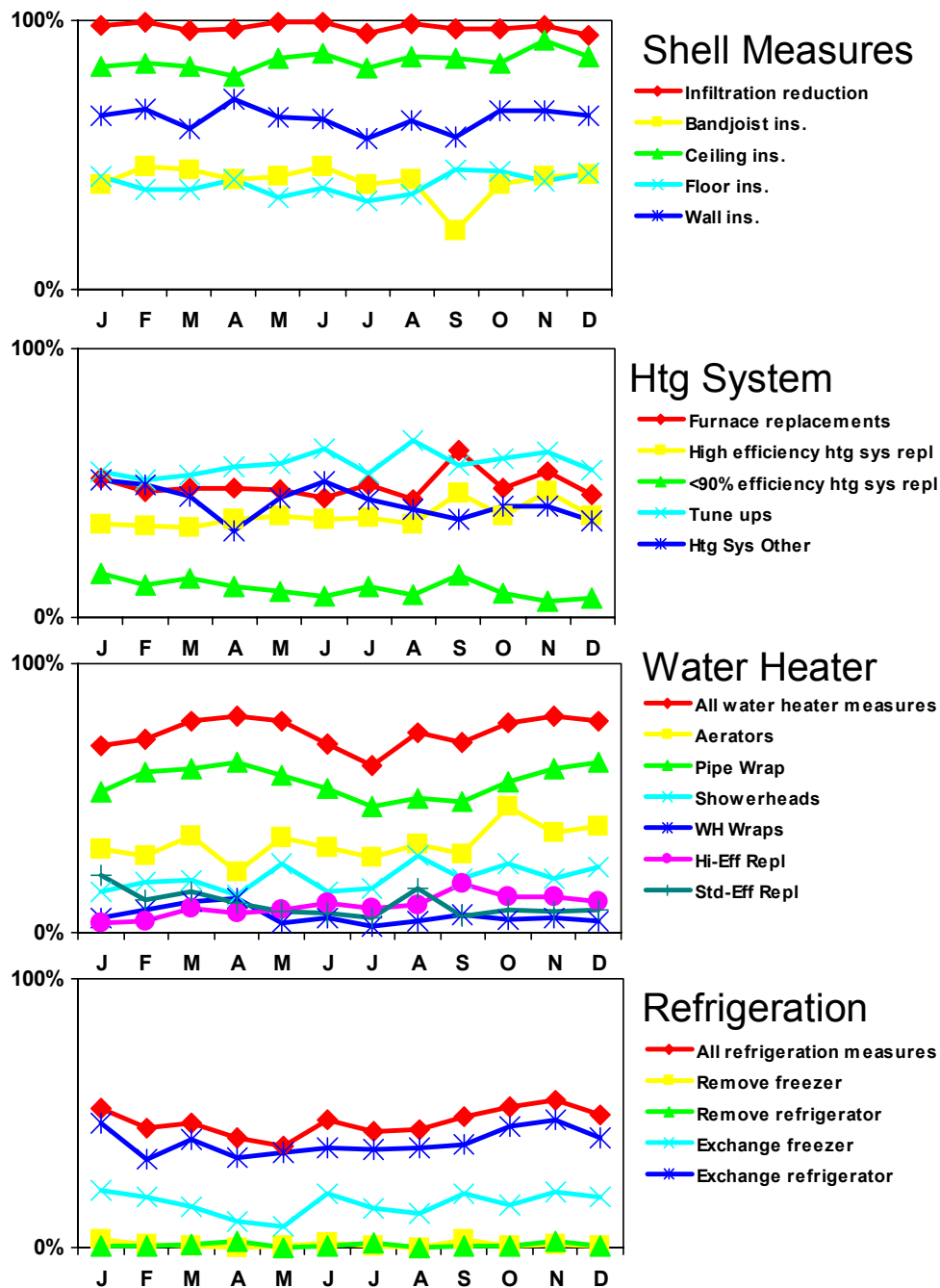
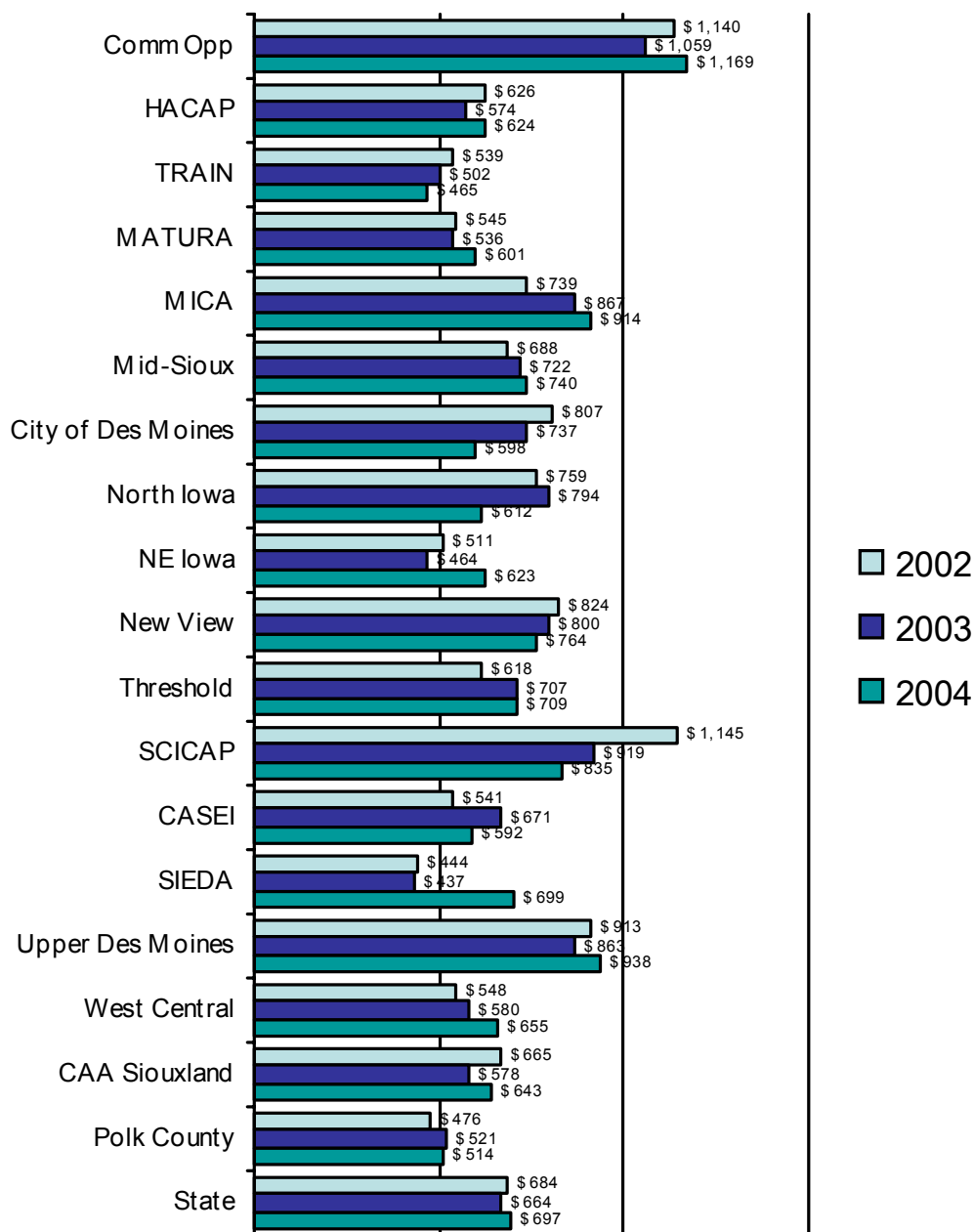


Figure 2.13 shows the month-to-month installation rates for shell, heating system, water heater, and refrigeration measures. Whereas shell and heating system installation rates tended to be flat for much of the year, we see a general tendency toward increased installations of water heater and refrigeration measures through the year. Of note, we can see high-efficiency water heater replacement rates outpaced standard-efficiency units mid-year.

Major Measure Costs by Agency

Figures 2.14-2.17 show the agency-specific average costs for ceiling, wall, and floor/crawlspace insulation and furnace replacements for the overall program and for utility-funded measures only. These costs represent the total expenditures for these measures averaged over the number of households that received the measure (as opposed to an average across all households that were treated by the agency).

Figure 2.14a. Average Cost of Ceiling Insulation – Dollars per Dwelling



Ceiling Insulation Expenditures

Figures 2.14a and 2.14b show the average installed costs for ceiling insulation. The statewide average cost for ceiling insulation was \$697 in 2004 as compared to \$664 in 2003. Community Opportunity was the only agency with an average cost exceeding \$1,000, at \$1,169. The average expenditures were lowest for TRAIN at \$465.

The average expenditures for SIEDA jumped from \$437 in CY 2003 to \$699. North Iowa reported lowered average costs, from \$794 in 2003 down to \$612 in 2004.

Figure 2.14b. Average Cost of Ceiling Insulation – Utility Dollars per Dwelling

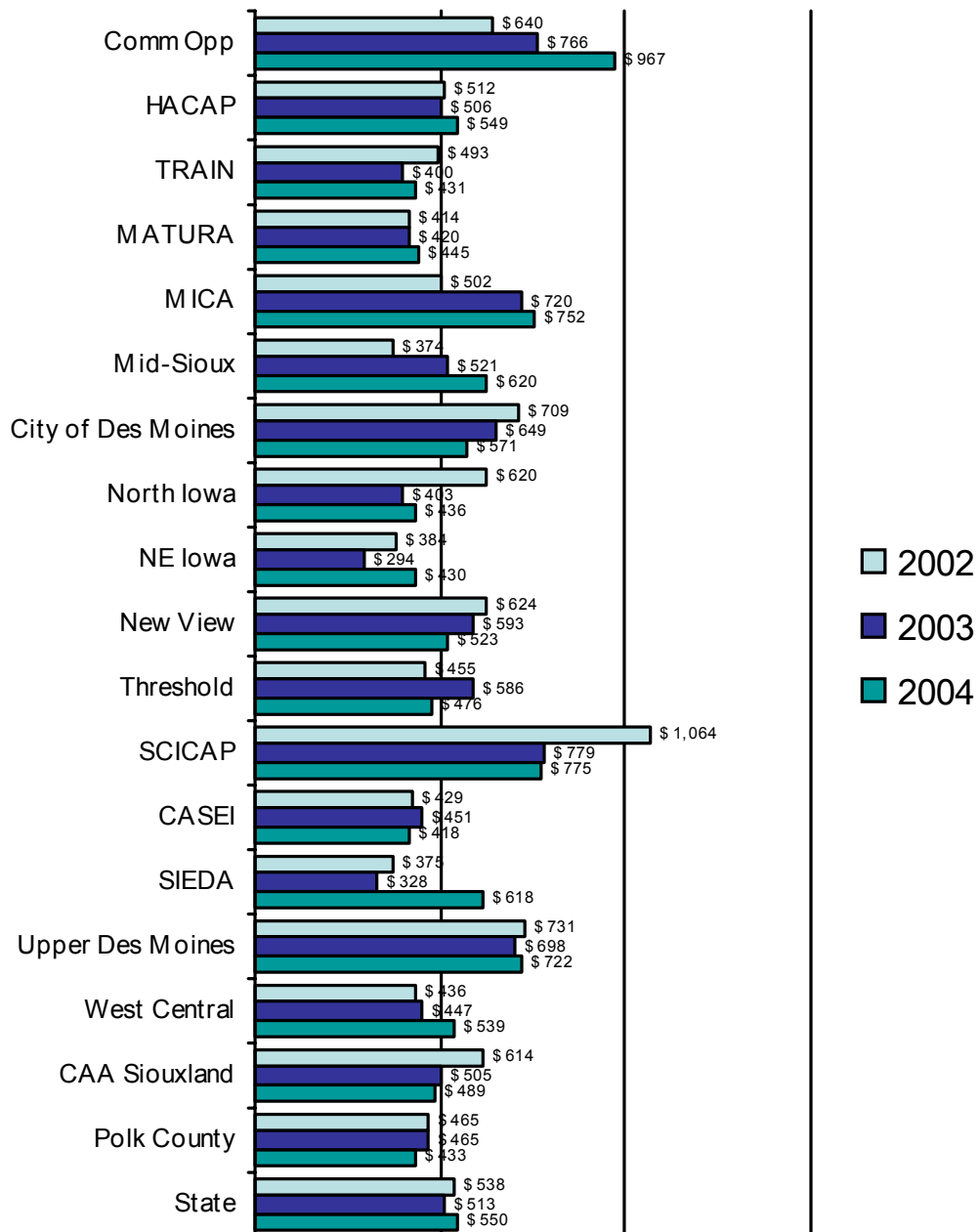
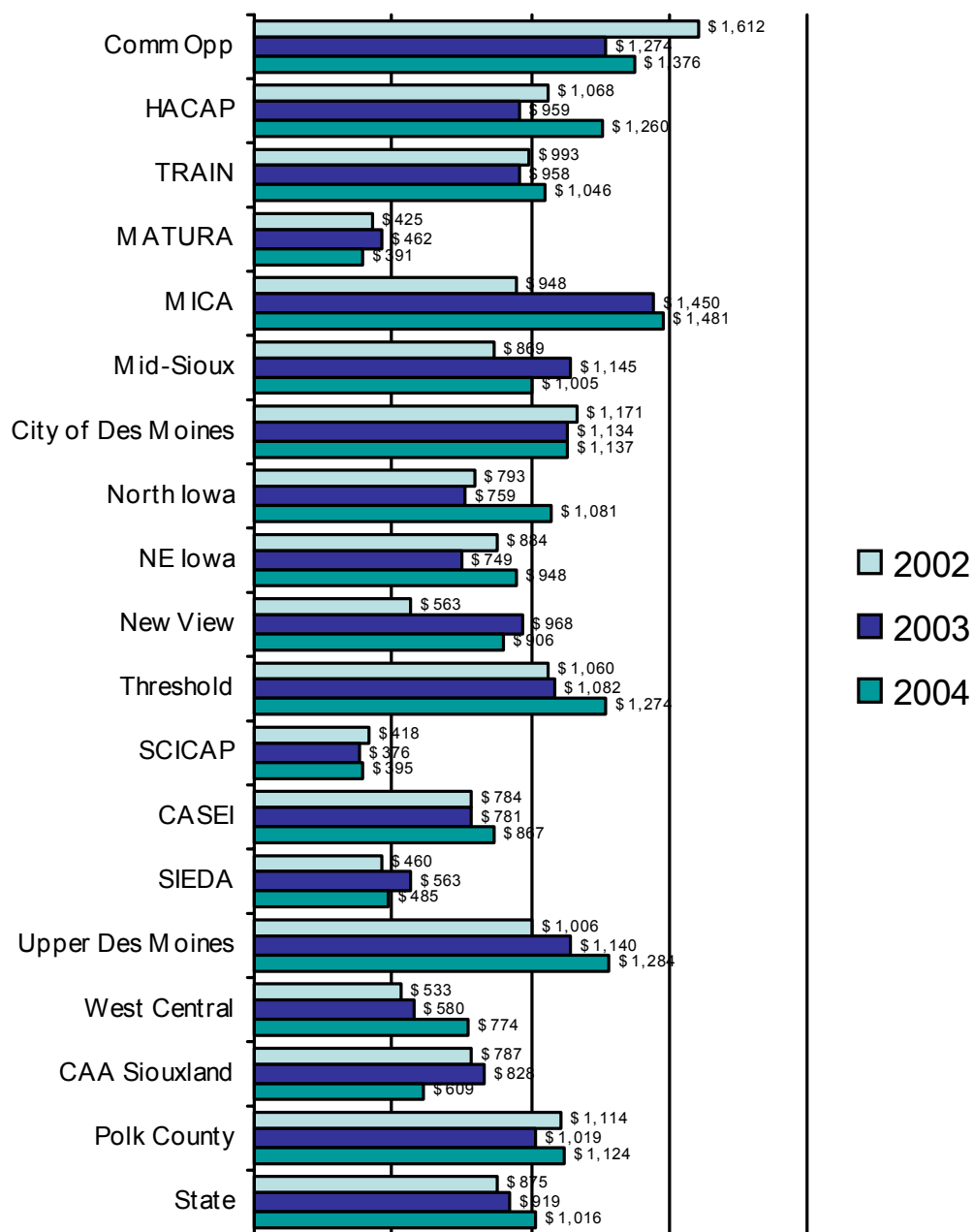


Figure 2.14b shows the statewide average expenditure of *utility funds* on ceiling insulation was \$530 in 2004. Community Opportunity continues a trend of increasing expenditures of utility money for ceiling insulation, from \$525 in 2001 (not shown) to \$967 in 2004.

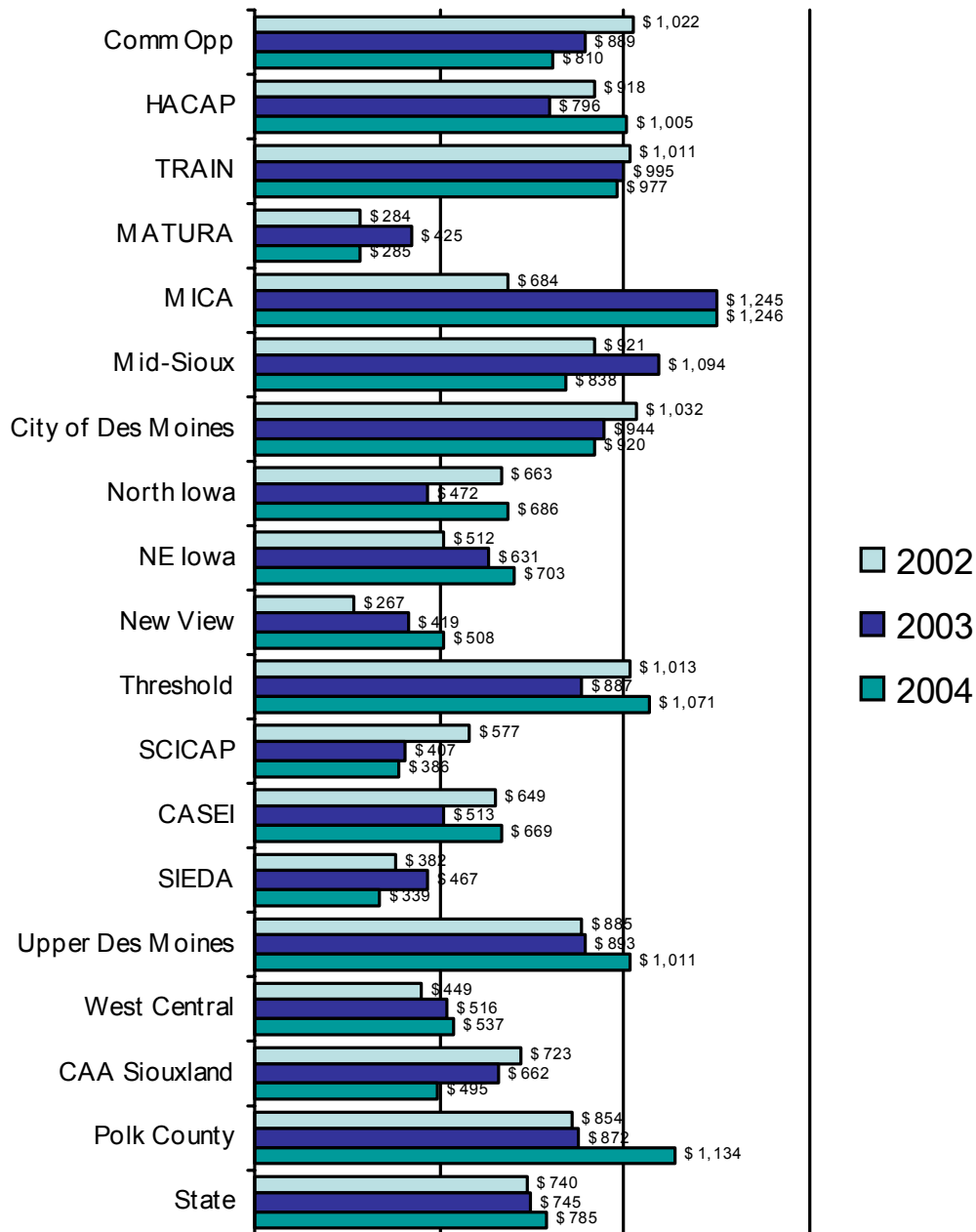
Figure 2.15a. Average Cost of Wall Insulation – Dollars per Dwelling



Wall Insulation Expenditures

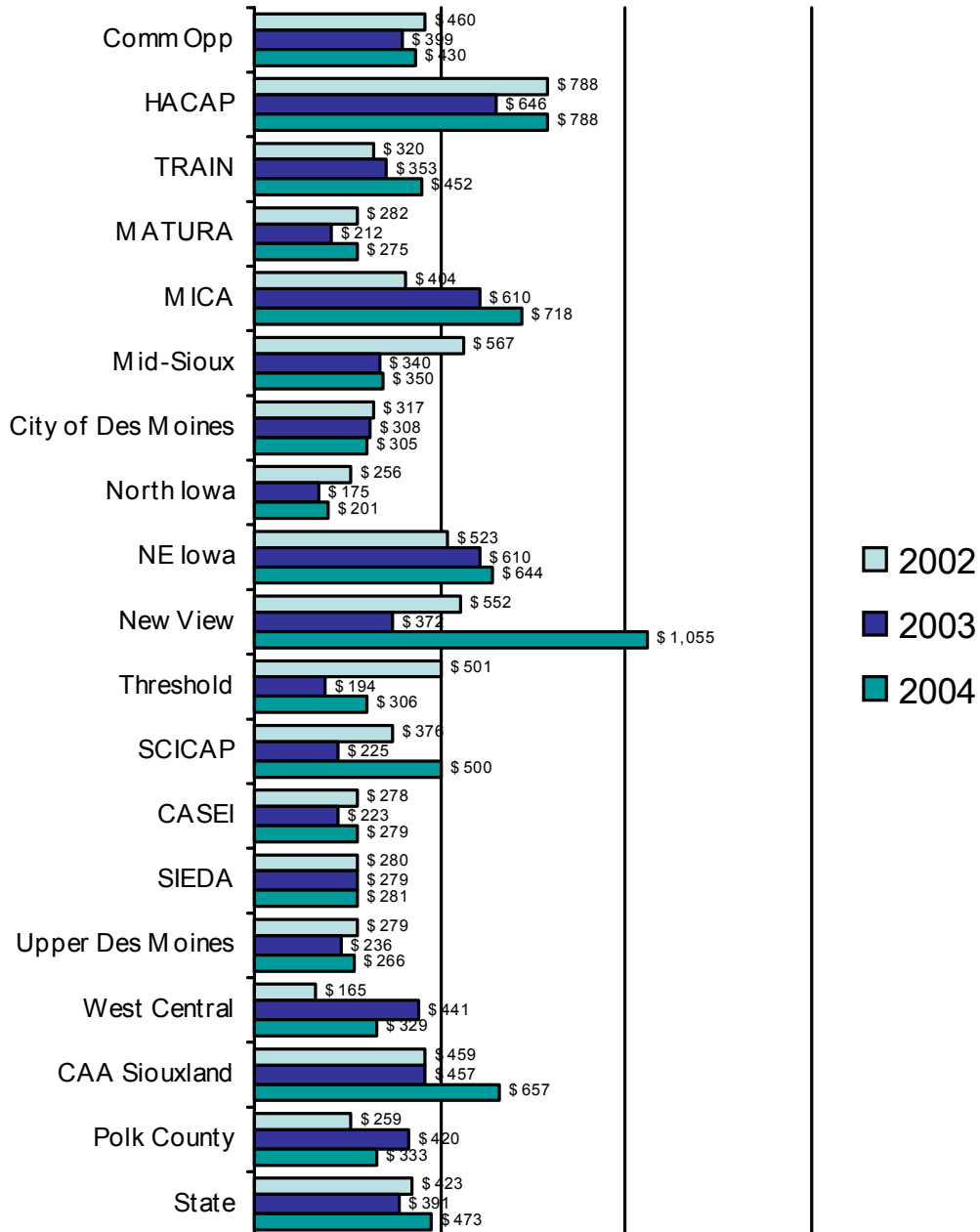
Figures 2.15a and 2.15b show the average installed costs for wall insulation. The overall average expenditure for wall insulation was increased from \$919 in CY 2003 to \$1,016 in 2004. MICA reported the highest average expenditures for a second year, \$1,481. MATURA and SCICAP both showed average expenditures of less than \$400 per dwelling. Average expenditures reported by CAA Siouxland dropped from \$828 in CY 2003 to \$609.

Figure 2.15b. Average Cost of Wall Insulation – Utility Dollars per Dwelling



Statewide, the average expenditures for *utility-funded* wall insulation increased year-over-year, from \$745 to \$785. MICA's average expenditure of utility funds on wall insulation remains the highest, at \$1,246 per dwelling. Matura, SCICAP, and SIEDA each reported less than \$400 for utility-funded wall insulation expenditures in 2004.

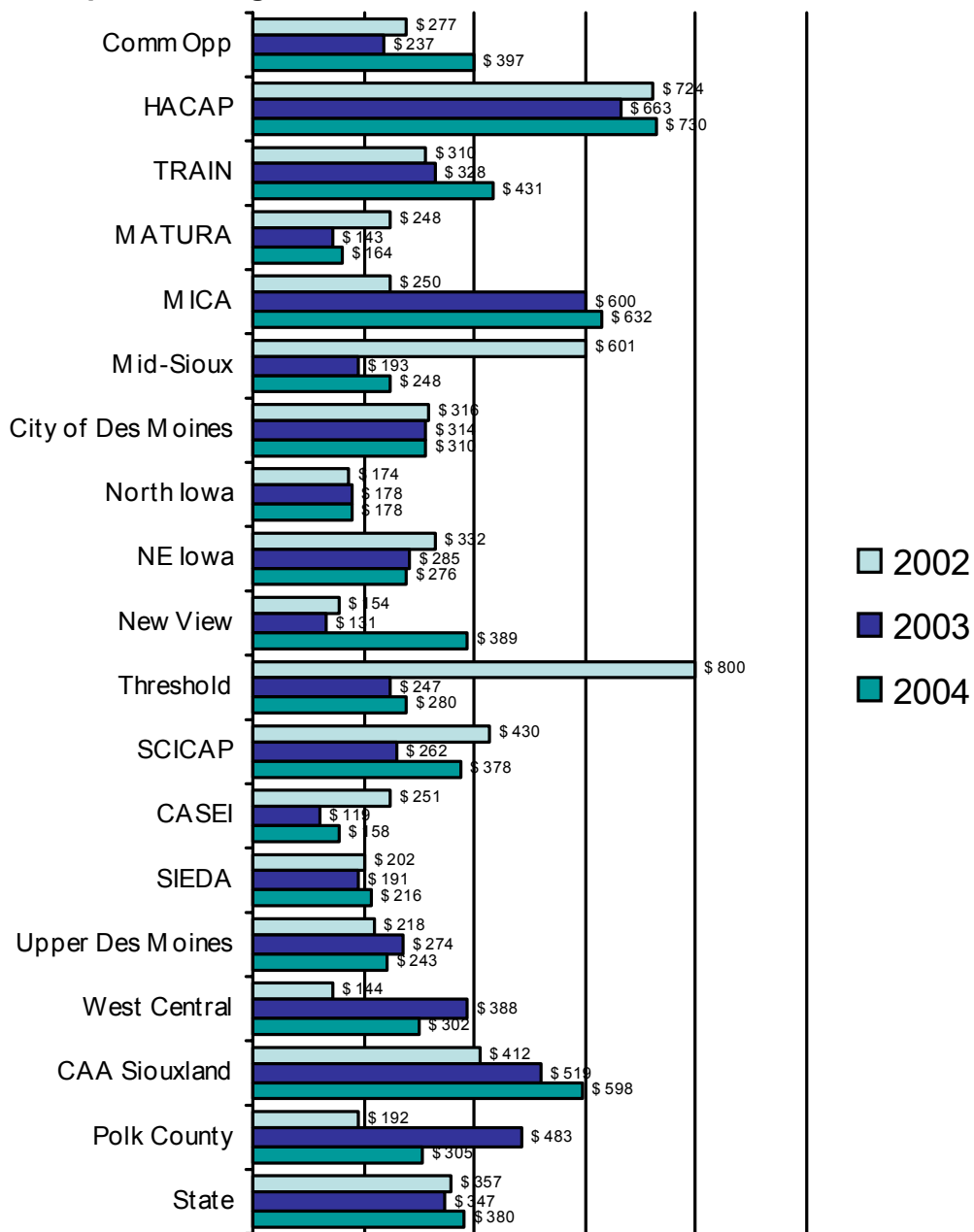
Figure 2.16a. Average Cost of Floor/Crawlspace Insulation – Dollars per Dwelling



Floor/Crawlspace Insulation

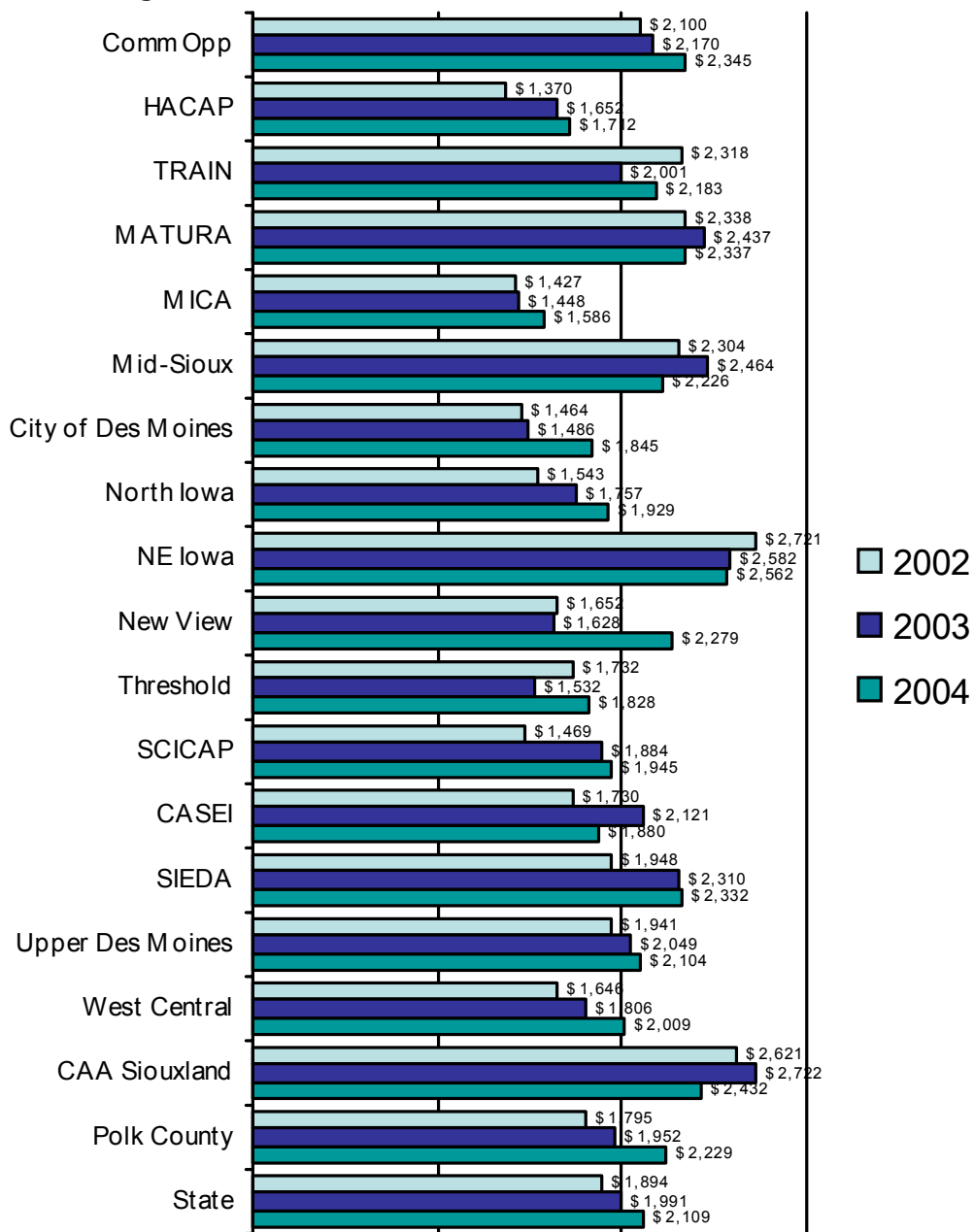
Figures 2.16a and 2.16b show the average expenditures for floor/crawlspace insulation in CY 2004. Statewide, the cost for floor/crawlspace insulation averaged \$473, up from \$391 in 2003. New View showed the highest average expenditure, at \$1,055, followed by HACAP at \$788. At \$201 per dwelling, North Iowa spent the least.

Figure 2.16b. Average Cost of Floor/Crawlspace Insulation – Utility Dollars per Dwelling



HACAP had the highest average expenditure of utility funding at \$730 per dwelling, and CASEI had the least at \$158.

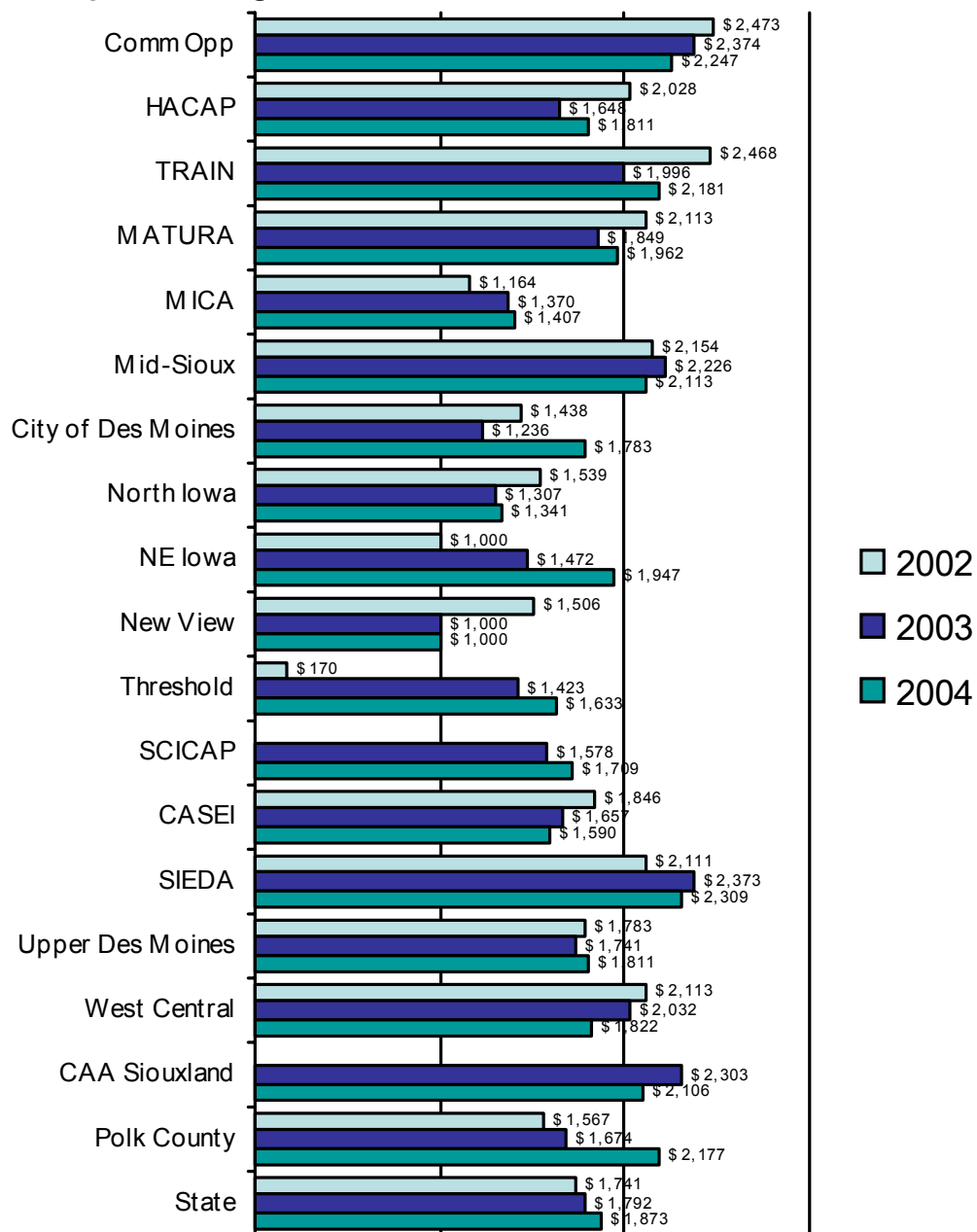
Figure 2.17a. Average Cost of Heating System Replacements – Dollars per Dwelling



Furnace Replacement Expenditures

Figures 2.17a and 2.17b show average expenditures for furnace replacements. Statewide average furnace replacement costs increased to \$2,109 in 2004 from \$1,991 the previous year. (Figure 2.17a). On average, NE Iowa and CAA Siouxland spent the most, at \$2,562 and \$2,432 respectively: MICA spent the least, averaging \$1,586.

Figure 2.17b. Average Cost of Heating System Replacements – Utility Dollars per Dwelling



All agencies reported *utility-funded* furnace replacements for households with weatherization completed during that year. Figure 2.17b shows the average utility funding for replacement heating systems. The average expenditure of utility funds was \$1,873, with SIEDA showing the highest average expenditure of \$2,309.

3. FUEL CONSUMPTION ANALYSIS AND ASSESSMENT OF AGENCY-LEVEL SAVINGS ADJUSTMENT FACTORS

The 1997 WAP report prompted a change in the methodology for estimating program savings. That study developed information pertaining to the potential error from summarizing agency-level results from the SLICE-algorithm estimates, which were designed for state-level and utility-level reporting. The revised methodology incorporates agency-level adjustment factors for estimated natural gas savings. The adjustment factors are developed annually using weather-normalization analysis of client fuel consumption histories.

Fuel Consumption Analysis of Natural Gas Impacts

For this study, we developed adjustment factors for each agency using observed savings from a PRISM analysis of natural gas clients with dates of completion from January 1, 2004 to December 1, 2004. These adjustment factors were applied to estimated natural gas, propane, and fuel oil heating and insulation measures, and to natural gas and propane water heater measures.

We used a comparison group to adjust for non-program factors that could affect energy consumption. We assessed savings for a group of clients with similar characteristics to our treatment group, and netted the change in consumption from this comparison group from the WAP client group savings. In order to assess a change in consumption for the comparison group, we established a pseudo-treatment period for each comparison group household by assigning the same period as that of a randomly selected household from the treatment group.

The comparison group consisted of all LIHEAP clients who were natural gas customers of the SLICE utilities and who applied for energy assistance from October, 2003 through March, 2004. The LIHEAP comparison group had a lower average annual consumption fuel consumption than the WAP client group: to fully account for non-program influences on energy consumption, we scaled the comparison group change for each agency by the ratio of the average energy consumption of the treatment to comparison groups during the pre-treatment period (or pseudo-treatment period in the case of the comparison group).

Methodology

We assessed impacts for changes in natural gas consumption using the methodology reported in detail in previous studies. Pre- and post-weatherization gas consumption was weather-normalized using PRISM. We used the same ten weather zones that we used in previous studies (Figure 3.1). Our long-term normal datasets for this year's analysis used the 10-year period ending in Dec, 2002.

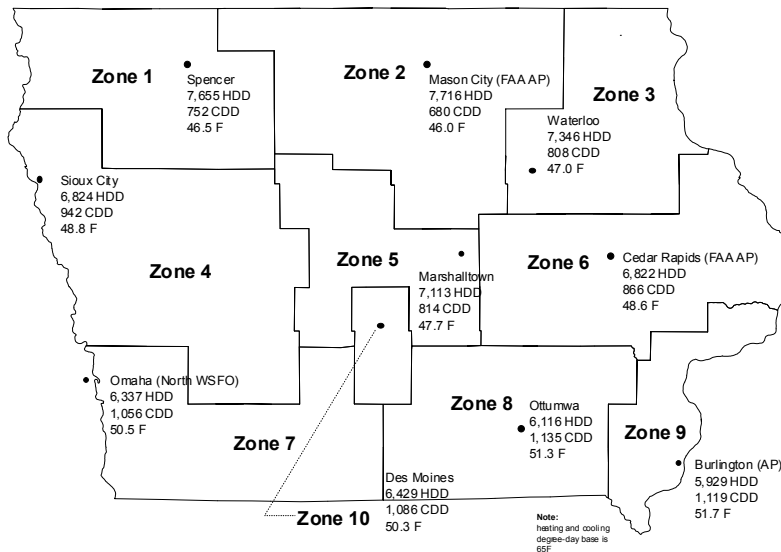


Figure 3.1 Weather zones used for the PRISM analysis

Study Sample

We used fuel histories immediately preceding and following the treatment period, requiring no less than eight actual readings in each of the pre and post periods, and no more than 390 days total consumption in either pre or post periods, and a period representing no less than 2,000 heating degree days in a typical year. In addition, we required a minimum R^2 of 0.50, a maximum coefficient of variation on NAC of 20.

Of 1,690 client households with gas heating, 633 had sufficient fuel consumption histories to include in our analysis. In addition, 23,209 comparison group households (LIHEAP clients) were represented in the dataset with sufficient fuel consumption histories.

Results

Our results are summarized in Table 3.2.

The key result is the realization rate. The realization rate is defined as the ratio of observed savings to estimated savings. By adjusting our estimated savings for natural gas with these realization rates, we help assure that savings reported for each agency are approximately correct. In this year's study as well as last, we observed that high uncertainty in agency-specific realization rates were in part due to inconsistencies in how an agency reported quantities of insulation. This is an important parameter for estimating savings for wall and ceiling insulation and measures should be taken to assure that they are recorded consistently across all agencies. We implemented routines to correct for inconstant reporting of insulation (e.g., bags vs. pounds) and corroborated square footage with house volume to reduce the uncertainty in estimated savings for any given agency.

We found relatively high uncertainty in the results for eight agencies, including HACAP, Matura, New View, SCICAP, and Polk County. We aggregated these into a single group in our analysis.

Table 3.2 Fuel Consumption Analysis Results

Agency	n (with gas heating source)	Treatment Group					Comparison Group					Average							
		n	Baseline				n	Baseline				Adjusted Savings (therms)	90 % CI	Estimated Savings (therms)	90% CI	Realization Rate	90% CI	Percent Savings	90% CI
			Cons. (therms)	90% CI	Savings (therms)	90% CI		Cons. (therms)	90% CI	Savings (therms)	90% CI								
HACAP	171	46	898	83	208	57	1,991	840	15	7	8	190	55	157	23	120.8%	27.7%	21.2%	5.1%
TRAIN	143	56	982	98	256	69	2,299	877	19	10	15	245	68	306	46	80.2%	19.1%	25.0%	5.8%
Matura	33	7	1,042	179	343	128	336	939	37	27	16	321	108	250	101	128.2%	28.6%	30.8%	6.4%
MICA	113	46	1,119	104	303	71	1,033	898	18	15	9	263	68	371	50	70.9%	12.8%	23.5%	4.6%
Mid-Sioux	64	16	1,295	126	417	100	449	879	26	19	13	423	96	362	75	116.9%	19.7%	32.7%	6.5%
City of Des Moines	93	33	1,565	125	508	83	1,899	942	16	21	8	478	80	498	61	95.8%	15.1%	30.5%	4.6%
North Iowa	103	50	1,184	93	311	59	1,346	969	24	62	20	240	53	265	38	90.5%	15.6%	20.3%	4.0%
Threshold	92	37	1,426	98	439	74	1,246	950	18	27	9	381	73	321	46	118.9%	16.9%	26.7%	4.6%
SIEDA	113	31	1,043	117	289	68	1,268	854	17	15	9	270	62	263	53	102.6%	20.4%	25.9%	4.9%
Upper Des Moines	141	61	1,219	85	354	51	1,841	991	15	2	9	357	52	346	33	103.1%	11.7%	29.3%	2.9%
West Central	155	68	1,098	74	282	49	2,355	855	17	19	14	268	48	256	32	104.6%	15.5%	24.4%	3.5%
CAA Siouxland	95	68	1,215	72	305	48	974	928	20	-31	11	325	48	315	33	103.4%	16.4%	26.8%	4.3%
Polk County	56	17	1,160	169	305	78	2,932	926	12	19	6	277	73	272	62	101.7%	22.5%	23.8%	6.3%
Aggregate	318	97	1,370	93	344	69	4,951	910	10	-4	27	325	67	337	40	96.7%	19.5%	23.8%	4.2%
Overall	1,690	633	1,194	29	323	19	23,209	902	5	11	6	303	18	310	13	97.9%	5.4%	25.4%	1.3%

We found an overall realization rate of 97.9%, indicating a slight overestimate of savings prior to correction. Overall, the program achieved 25.4% savings $\pm 1.3\%$ at 90% confidence. Adjusted savings averaged 303 therms per household for our study group. The agency-specific realization rates ranged from 71% ($\pm 13\%$) to 128% ($\pm 29\%$).

In previous studies we have emphasized the importance between savings and pre-weatherization energy consumption: in general, higher pre-weatherization consumption yields greater savings. Since the WAP prioritizes on energy consumption, we would expect that the average treatment group consumption would exceed the comparison group consumption in the pre-weatherization period. Also, the greater the difference between the treatment and comparison group consumption would indicate that the agencies are more effectively targeting the highest users.

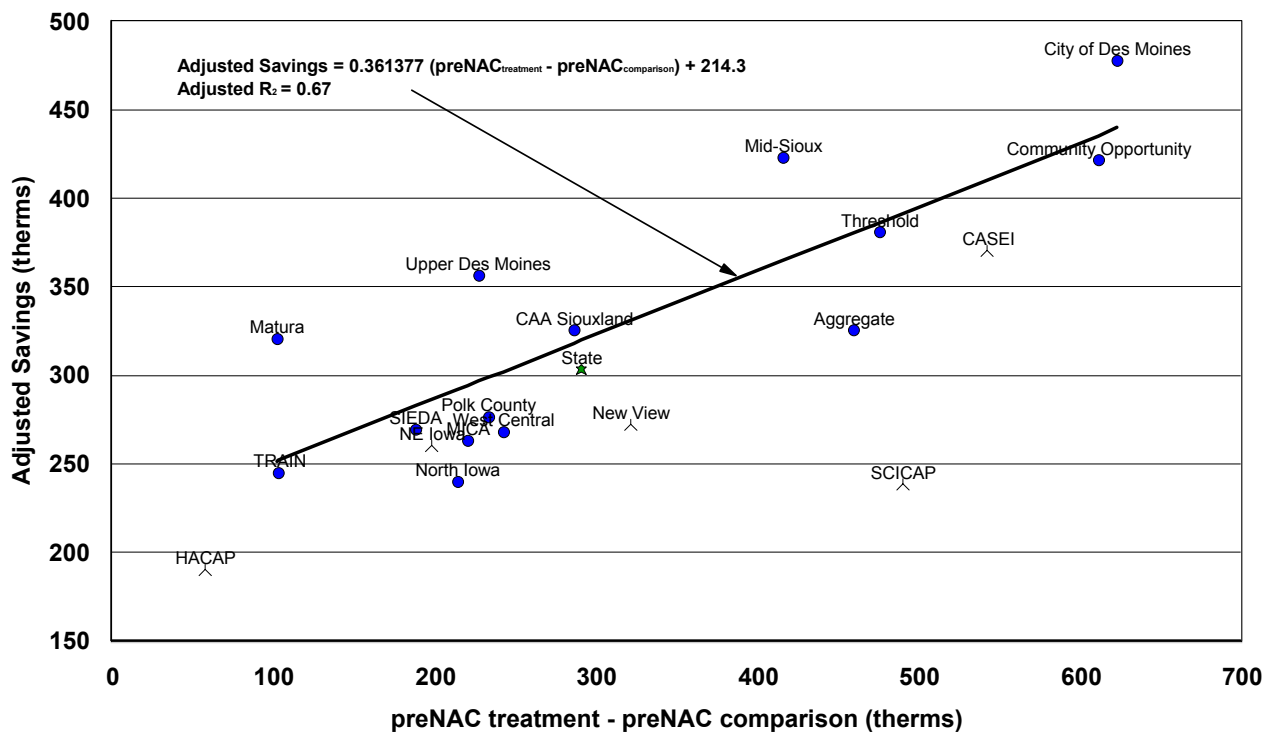


Figure 3.2. Savings in relation to the difference between treatment and comparison group usage.

We plotted the relationship between savings and the difference in average energy consumption between the treatment and comparison groups in Figure 3.2. In addition we regressed a line through the groups indicated in Table 1: points denoted by a filled dot represent those used in the regression equation, and those plotted with an inverted 'Y' denote those that comprise the 'Aggregate' data point.

The chart demonstrates the potential savings that can be attained by targeting clients with the highest energy consumption, where the greater difference (shown on the 'x' axis) is indicative of more effective targeting. These findings affirm our previous analysis that concluded targeting the highest usage households substantially increases the average household savings.

4. DETAILED SPENDING AND IMPACT PROFILES BY UTILITY

This section provides tables of spending and impacts for the utilities, the state, and the overall program. The tables are designed to provide information to meet the filing requirements for cost recovery.

The summary of impacts for state and utility funding are similar to those provided in the earlier SLICE reports.

We show a second table for each of the utilities in this report. These tables show the combined impacts of electricity and natural gas measures from all funding sources. These tables should prove useful for the energy and demand planning departments at the utilities to account for the aggregate impacts of the low-income program, and not just the impacts funded by a specific utility.

Energy savings for waterbed mattresses, a measure since the 1994 program, may be negative in these tables. This is because the algorithm accounts for reductions in the heat which the waterbed radiates to the house (which results in more heat required from the heating system). See Appendix A of *An Evaluation of the 1994 Iowa Low-Income Weatherization Efforts* for a detailed description of the algorithm.

In addition, cases where water heater turndowns are the only water heater energy savings measure will show up as negative. The water heater savings algorithms account for interactions between the measures. Because of this, the water heater measure savings are reduced when water heater turndowns are implemented. In the rare instance that a turndown is the only water heater measure installed, the savings show up as negative.

Combined State and Utility
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

Measure	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings						Average Estimated First Year Measure Cost and Savings																																									
																			Average per Treated Household																																									
	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating					Summer kW	Electric kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electric kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu																													
OVERALL	1,980	1,974	1,713	246	38	1							6,550,875	392.0	423.1	2,107,645	5,230	504,519	70,652	7,459	8	3308.52	0.107	0.112		1,068	3,053	295	287	196	8																													
Shell & Htg. Sys.	1,973	1,956	1,655	239	38	1	1,779	1,900					5,618,456	228.6	250,382	221.0	340,016	590,399	5,103	475,112	68,922	7,459	8	2847.67	0.128	0.141	0.116	179	302	3,084	287	288	196	8																										
Wall Insul.	1,253	1,253	1,104	111	24	0	1,120	1,251					1,274,138	88.55	97,445	84.15	130,099	227,544	1,802	149,334	15,289	1,906	0	1016.87	0.079	0.07	0.067	104	182	1,451	135	138	79	-																										
Ceiling Insul.	1,689	1,689	1,428	194	34	0	1,527	1,687					1,178,085	119.67	130,907	65.69	101,838	232,745	907	75,356	12,136	1,254	0	697.50	0.078	0.06	0.039	60	138	0,565	53	63	37	-																										
Infltr. Reduction	1,927	1,747	1,608	230	37	1	1,744	37					680,466	15.71	17,109	37.21	55,991	73,100	926	85,818	12,948	1,295	8	353.12	0.009	0.009	0.008	10	1,006	1,513	42	0,576	53	56	35	8																								
Found./Crawl. Insul	777	777	654	94	17	0	703	776					368,315	4.62	4,920	29.69	45,460	50,380	318	29,413	6,463	407	0	474.02	0.007	7	0.038	59	65	0,486	45	69	24	-																										
Bandjoist Insul.	806	806	676	92	18	0	-	806					68,819	0.00	0	4.29	6,628	6,628	46	4,260	648	78	0	85.38	-	-	0.005	8	8	0,067	6	7	4	-																										
Hi-Eff Htg Sys Repl	746	0	641	88	17	0	-	0					1,611,380	0.00	0	0.00	0	0	1,182	110,335	18,281	1,802	0	2160.03	-	-	-	-	-	-	1,844	172	208	106	-																									
Std-Eff Htg Sys Repl	218	0	176	31	11	0	-	0					428,384	0.00	0	0.00	0	0	220	20,346	3,158	718	0	1985.11	-	-	-	-	-	-	1,247	116	102	65	-																									
Electric Htg Sys Repl	0	0	0	0	0	0	-	0					7,937	0.00	0	0.00	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-																										
Other Htg Sys Repl	2	0	1	1	0	0	-	0					921	0.00	0	0.00	0	0	3	250	0	0	0	460.38	-	-	-	-	-	-	2,575	250	0	-	-																									
	Total						Number of Measures by Fuel Type						Summer kW						Winter kWh						Annua kWh						Pk-Day therms						Annua therms						Propane gallons						Fuel Oil gallons						Other Mbtu					
Water Heating	1,481	226	1,203	52	0	0	2,058	290	1,702		66	0	0	256,939	0.0	1.8	112,345	128.0	29,645	1,783	0	0	0	173.49	0.000	0.008		497	0.106	25	34	-	-																											
Temp. Reduct.	5	0	5	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.2	87	0	0	0	0	0.00	-	-	-	-	0.050	17	-	-	-	-																										
WH Wrap	126	26	99	1	0	0	0	0	0	0	0	0	2,266	0.00	0.01	6,255	3.3	1,135	12	0	0	0	17.99	0.000	0.000		241	0.033	11	12	-	-	-																											
Pipe Insul.	1,093	172	888	33	0	0	0	0	0	0	0	0	6,305	0.00	0.03	16,916	12.9	4,487	187	0	0	0	0.00	0.000	0.000		98	0.015	5	6	-	-	-																											
LF Showerheac	409	75	321	13	0	0	433	80	340	13	0	0	3,174	0.00	1.15	50,546	23.8	7,332	322	0	0	0	7.76	0.000	0.015		674	0.074	23	25	-	-	-																											
Faucet Aerator	652	95	542	15	0	0	1,147	164	957	26	0	0	3,184	0.00	0.20	8,845	5.6	1,723	48	0	0	0	4.88	0.000	0.002		93	0.010	3	3	-	-	-																											
Std-Eff WH Htr Repl.	216	32	157	27	0	0	216	32	157	27	0	0	119,561	0.00	0.24	21,984	31.1	6,099	1,213	0	0	0	553.52	0.000	0.007		687	0.198	39	45	-	-	-																											
Hi-Eff WH Htr Repl.	199	11	188	0	0	0	252	14	248	0	0	0	122,449	0.00	0.19	7,799	51.1	8,782	0	0	0	0	615.32	0.000	0.018		709	0.272	47	-	-	-	-																											
Lighting	1,653	1,653					9,020	9,020					76,342	48.5	89.6	461,979	-	-	-	-	-	-	46.18	0.029	0.054		279	-	-	-	-	-	-																											
Capsylite (42W)	11	11					75	75					276	0.14	0.25	1,300	-	-	-	-	-	-	25.09	0.01																																				

State Only
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for DCAA-Funded Measures

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings Average per Treated Household									
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Summer kWh	Electricity kW	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity kW	Winter kW	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu				
OVERALL	1,970	1,930	1,680	246	38	1			4,063,661	219.5	249.0		1,191,596	2,934	282,970	70,652	7,459	8	2062.77	0.079	0.106		617	1,746	168	287	196	8				
Sheil & Htg. Sys.	1,962	1,904	1,627	239	38	1	1,765	1,344	3,489,958	128.8	130,120	137.0	210,915	341,035	2,865	267,313	68,922	7,459	8	1778.78	0.073	0.102	157	179	1,761	164	288	196	8			
Wall Insul.	848	848	510	111	24	0	605	806	659,171	46.92	47,232	39.34	61,419	108,651	692	64,920	15,289	1,906	0	777.32	0.078	0.049	76	128	1,358	127	138	79	-			
Ceiling Insul.	1,154	1,154	623	194	34	0	811	1,121	595,547	63.60	63,294	41.62	64,273	127,567	317	29,851	12,136	1,254	0	516.07	0.078	0.037	57	111	0,509	48	63	37	-			
Infil. Reduction	1,925	1,747	1,574	230	37	1	1,744	37	675,415	15.71	17,099	37.21	55,991	73,090	915	84,743	12,948	1,295	89	0.009	10	1,006	1,513	42	0,581	54	56	35				

Interstate Power and Light Co.
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use			Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Spending on Materials & Labor (\$)	Average Estimated First Year Measure Cost and Savings Average per Treated Household							
Measure	Total	Electric	Gas	Cooling	Heating			Summer kW	kWh	Electricity kW	kWh	Annual kWh	Pk-Day therms	Annual therms		Summer kW	Electricity kWh	Winter kWh	Annual kWh	Pk-Day therms	Annual therms		
OVERALL	704	597	419				1,146,183	92.4		105.4		521,893	1,007	96,449		1628.10	0.086	0.121		874	2,403	230	
Shell & Htg. Sys.	656	559	407	513	311		955,361	51.8	62,500	54.3	82,850	145,349	982	90,726		1456.34	0.101	0.122	0.175	266	264	242	
Wall Insul.	429	359	282	332	219		281,801	21.15	25,506	30.54	46,538	72,044	402	37,229		656.88	0.064	0.077	0.139	213	201	142	
Ceiling Insul.	571	486	354	455	277		259,170	29.01	34,989	14.09	21,742	56,732	214	19,785		453.89	0.064	0.077	0.051	78	117	60	
Infltr. Reductor	2	7	1	-	0		95	0.01	11	0.00	0	11	0	6,752		0.009	11	-	-	11	0.081	8	
F. Showhead	272	216	172	199	120		78,720	1.65	1,994	8.81	13,183	15,177	75	6,887		289.11	0.008	0.010	0.073	110	70	43	
Bandjoist Insul.	175	143	170	-	143		14,921	0.00	0	0.91	1,386	1,386	11	1,034		85.26	-	-	0.006	10	10	6	
Hi-Eff Htg Sys Repl	167	0	167	-	0		320,653	0.00	0	0.00	0	0	279	25,784		1920.08	-	-	-	-	-	1,673	154
Std-Eff Htg Sys Repl	0	0	0	-	0		0	0.00	0	0.00	0	0	0	0		0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0		0	0.00	0	0.00	0	0	0	0		0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0		0	0.00	0	0.00	0	0	0	0		0.00	-	-	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas		Summer kW		Winter kW		Annual kWh	Pk-Day therms	Annual therms		Summer kW		Winter kW		Annual kWh	Pk-Day therms	Annual therms	
Water Heating	339	70	269	466	73	393	31,986	0.0		0.5		27,778	25.4	5,723		94.35	0.000	0.007		397	0.094	21	
Temp. Reduct.	0	0	0				89	0.00		0.00		0	0.0	0		0.00	-	-		-	-	-	
WH Wrap	6	3	3				1,133	0.00		0.01		5,606	2.8	961		4.48	0.000	0.000		98	0.014	5	
Pipe Insul.	253	57	196	106	21	85	730	0.00		0.33		14,304	5.8	7,178		7.15	0.000	0.015		681	0.072	22	
Faucet Aerator	175	31	144	296	46	250	779	0.00		0.07		3,270	1.5	455		4.45	0.000	0.002		105	0.010	3	
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00		0.00		0	0.0	0		0.00	-	-		-	-	-	
Hi-Eff Wtr Htr Repl.	64	6	58	64	6	58	29,256	0.00		0.10		3,876	15.2	2,484		457.13	0.000	0.016		646	0.262	43	
Lighting	487	487		2,870	2,870		20,109	13.8		23.5		131,551	-	-		45.69	0.028	0.052		270	-	-	
Capsytle (42W)	0	0	0	0	0	0	0	0.00		0.00		0	-	-		0.00	-	-		-	-	-	
Capsytle (52W)	0	0	0	0	0	0	0	0.00		0.00		0	-	-		0.00	-	-		-	-	-	
Capsytle (72W)	0	0	0	0	0	0	0	0.00		0.00		0	-	-		0.00	-	-		-	-	-	
Capsytle, unknown	0	0	0	0	0	0	0	0.00		0.00		0	-	-		0.00	-	-		-	-	-	
CFL (5W)	7	7	24	24	0	0	78	0.04		0.08		414	-	-		11.18	0.006	0.011		59	-	-	
CFL (7W)	0	0	0	0	0	0	0	0.00		0.00		0	-	-		0.00	-	-		-	-	-	
CFL (9W)	0	0	0	0	0	0	0	0.00		0.00		0	-	-		0.00	-	-		-	-	-	
CFL (11W)	27	27		118	118		415	0.31		0.57		2,929	-	-		15.36	0.011	0.021		108	-	-	
CFL (15W)	209	209		1,092	1,092		6,368	4.71		8.70		44,630	-	-		30.47	0.023	0.042		214	-	-	
CFL (18W)	0	0	0	0	0	0	0	0.00		0.00		0	-	-		0.00	-	-		-	-	-	
CFL (20W)	184	184		1,127	1,127		9,520	5.28		9.76		50,293	-	-		51.74	0.029	0.053		273	-	-	
CFL (23W)	88	88		340	340		2,592	2.14		3.95		20,375	-	-		29.45	0.024	0.045		232	-	-	
CFL (25W)	71	71		159	159		1,046	1.21		2.23		11,519	-	-		14.74	0.017	0.031		162	-	-	
CFL (30W)	6	6		10	10		90	0.13		0.23		1,192	-	-		14.98	0.021	0.039		199	-	-	
CFL, unknown	0	0	0	0	0	0	0	0.00		0.00		0	-	-		0.00	-	-		-	-	-	
Waterbed Mattress Pad																							

Interstate Power and Light Co.
Calendar Year 2004 Estimates
Fuel and Demand Impacts For All Customer Households From All of Funding Sources

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Estimated First-Year Savings Electricity					Average per Treated Household								
											Gas						Gas		
Measure	Total	Electric	Gas	Cooling	Heating	Summer kW	Summer kWh	Winter kW	Winter kWh	Annual kWh	Pk-Day therms	Annual therms	Summer kW	Summer kWh	Winter kW	Winter kWh	Annual kWh	Pk-Day therms	Annual therms
OVERALL	962	832	555			146.7		200.9		903,066	1,787	171,032	0.092		0.122		1,085	3.220	308
Shell & Htg. Sys.	960	824	547	756	805	80.2	96,684	116.0	176,261	272,945	1,745	161,732	0.106	128	0.144	219	331	3.190	296
Wall Insul.	618	531	386	478	531	30.08	36,276	45.03	68,982	105,258	547	50,780	0.063	76	0.085	130	198	1.417	132
Ceiling Insul.	815	707	472	648	706	41.94	50,580	27.81	42,677	93,257	282	26,181	0.065	78	0.039	60	132	0.597	55
Infil. Reduction	910	742	533	741	19	5.57	6,719	27.15	40,436	47,155	334	30,910	0.008	9	1.429	2,128	64	0.627	58
Found./Crawl. Insul.	398	331	241	296	331	2.58	3,108	14.12	21,356	24,464	105	9,746	0.009	10	0.043	65	74	0.437	40
Bandjoist Insul.	414	371	252	-	371	0.00	0	1.85	2,810	2,810	16	1,500	-	-	0.005	8	8	0.064	6
Hi-Eff Htg Sys Repl	225	0	225	-	0	0.00	0	0.00	0	0	403	37,320	-	-	-	-	-	1.791	166
Std-Eff Htg Sys Repl	46	0	46	-	0	0.00	0	0.00	0	0	57	5,294	-	-	-	-	-	1.248	115
Electric Htg Sys Repl	0	0	0	-	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas	Summer kW	Winter kW		Annual kWh	Pk-Day therms	Annual therms	Summer kW		Winter kW		Annual kWh	Pk-Day therms	Annual therms
Water Heating	481	108	372	763	138	624	0.0	1.0		53,636	43.3	9,459	0.000		0.010		497	0.116	25
Temp. Reduct.	0	0	0				0.00	0.00		0	0.0	0	-		-		-	-	-
WH Wrap	28	6	22				0.00	0.00		1,443	0.7	254	0.000		0.000		241	0.033	12
Pipe Insul.	361	85	275				0.00	0.02		8,360	3.8	1,319	0.000		0.000		98	0.014	5
LF Showerhead	154	37	117	161	38	123	0.00	0.62		27,453	8.6	2,659	0.000		0.017		742	0.074	23
Faucet Aerator	256	51	205	452	82	370	0.00	0.12		5,256	2.1	654	0.000		0.002		103	0.010	3
Std-Eff Wtr Htr Repl.	38	10	27	38	10	27	0.00	0.17		6,870	6.4	1,042	0.000		0.017		687	0.237	39
Hi-Eff Wtr Htr Repl.	80	6	74	112	8	104	0.00	0.11		4,254	21.6	3,530	0.000		0.018		709	0.292	48
Lighting	730	730		4,377	4,377		21.5	39.7		204,584	-	-	0.029		0.054		280	-	-
Capsylite (42W)	4	4		45	45		0.08	0.15		764	-	-	0.020		0.037		191	-	-
Capsylite (52W)	0	0		0	0		0.00	0.00		0	-	-	-		-		-	-	-
Capsylite (72W)	2	2		2	2		0.01	0.01		77	-	-	0.004		0.007		38	-	-
Capsylite, unknown	0	0		0	0		0.00	0.00		0	-	-	-		-		-	-	-
CFL (5W)	7	7		24	24		0.04	0.08		414	-	-	0.006		0.011		59	-	-
CFL (7W)	0	0		0	0		0.00	0.00		0	-	-	-		-		-	-	-
CFL (9W)	0	0		0	0		0.00	0.00		0	-	-	-		-		-	-	-
CFL (11W)	30	30		132	132		0.34	0.64		3,282	-	-	0.011		0.021		109	-	-
CFL (15W)	305	305		1,543	1,543		6.82	12.60		64,974	-	-	0.022		0.041		213	-	-
CFL (18W)	0	0		0	0		0.00	0.00		0	-	-	-		-		-	-	-
CFL (20W)	258	258		1,806	1,806		8.42	15.56		80,190	-	-	0.033		0.060		311	-	-
CFL (23W)	127	127		492	492		3.18	5.87		30,272	-	-	0.025		0.046		238	-	-
CFL (25W)	113	113		321	321		2.44	4.50		23,207	-	-	0.022		0.040		205	-	-
CFL (30W)	8	8		12	12		0.15	0.27		1,404	-	-	0.018		0.034		176	-	-
CFL, unknown	0	0		0	0		0.00	0.00		0	-	-	-		-		-	-	-
Waterbed Mattress Pad	7	6	5	13	7	6	0.00	2.03		5,364	-1.0	-159	0.000		0.339		894	-0.193	-32
King	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-		-		-	-	-
Queen	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-		-		-	-	-
Double	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-		-		-	-	-
Single	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-		-		-	-	-
Unknown	7	6	5	13	7	6	0.00	2.03		5,364	-1.0	-159	0.000		0.339		894	-0.193	-32
Refrigerator/Freezer	374	374		496	496		45.08	42.15		366,537	-	-	0.121		0.113		980	-	-
Refrigerator Removal	9	9		9	9		1.13	1.06		9,188	-	-	0.126		0.117		1,021	-	-
Refrigerator Exchange	326	326		359	359		34.85	32.59		283,351	-	-	0.107		0.100		869	-	-
Freezer Removal	10	10		10	10		0.88	0.82		7,125	-	-	0.088		0.082		713	-	-
Freezer Exchange	101	101		118	118		8.23	7.69		66,872	-	-	0.081		0.076		662	-	-

Aquila Networks - PNG
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Average		Estimated First Year Measure Cost and Savings							
Measure	Total	Electric	Gas	Cooling	Heating		Summer kW	kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Spending on Materials & Labor (\$)	Summer kW	kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms
OVERALL	183	0	183			231,200	0.0		0.0		0	216	21,722	1263.39	-	-	-	-	-	1.183	119
Shell & Htg. Sys.	179	0	179	0	0	224,927	0.0	0	0.0	0	0	210	19,963	1256.58	-	-	-	-	-	1.171	112
Wall Insul.	85	0	85	0	0	48,582	0.00	0	0.00	0	0	67	6,370	571.56	-	-	-	-	-	0.791	75
Ceiling Insul	141	0	141	0	0	82,747	0.00	0	0.00	0	0	61	5,805	586.86	-	-	-	-	-	0.432	41
Infil. Reduction	51	0	51	0	0	4,957	0.00	0	0.00	0	0	11	1,067	97.19	-	-	-	-	-	0.223	21
Found./Crawl. Insul.	32	0	32	0	0	17,194	0.00	0	0.00	0	0	20	1,903	537.33	-	-	-	-	-	0.628	59
Bandjoist Insul.	40	0	40	-	0	1,871	0.00	0	0.00	0	0	3	248	46.78	-	-	-	-	-	0.064	6
Hi-Eff Htg Sys Repl	51	0	51	-	0	69,576	0.00	0	0.00	0	0	47	4,569	1364.23	-	-	-	-	-	0.929	90
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas	Summer kW		Winter kW		Annua kWh	Pk-Day therms	Annua therms		Summer kW		Winter kW		Annua kWh	Pk-Day therms	Annua therms
Water Heating	87	0	87	119	0	119	6,273	0.0	0.0		0	6.9	1,759	72.10	-	-	-	-	-	0.080	20
Temp. Reduct.	0	0	0				0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
WH Wrap	0	0	0				0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Pipe Insul.	66	0	66				315	0.00	0.00		0	1.0	337	4,778	-	-	-	-	-	0.015	5
LF Showerhead	34	0	34	39	0	39	286	0.00	0.00		0	2.7	840	8.41	-	-	-	-	-	0.080	25
Faucet Aerator	41	0	41	69	0	69	182	0.00	0.00		0	0.4	122	4.44	-	-	-	-	-	0.010	3
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Hi-Eff Wtr Htr Repl.	11	0	11	11	0	11	5,490	0.00	0.00		0	2.8	460	490.77	-	-	-	-	-	0.256	42
Lighting	0	0	0	0	0	0	0	0.0	0.0		0	-	-	0.00	-	-	-	-	-	-	-
Capsyite (42W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Capsyite (52W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Capsyite (72W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Capsyite, unknown	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (5W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (7W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (9W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (11W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (15W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (18W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (20W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (23W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (25W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (30W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL, unknown	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
King	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Queen	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Double	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Single	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Unknown	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Refrigerator/Freezer	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Refrigerator Removal	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Refrigerator Exchange	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Freezer Removal	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Freezer Exchange	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Costs for Measures Without Energy Impacts Installed in 186 Total Households with Spending and/or Energy Impacts:																					
Total						19,159															
Unspecified Insul.	22					5,749								261.34							
Duct Insulation	0					0								0.00							
Duct Sealing	20					411								20.55							
Damming Material	0					0								0.00							
Htg. Sys. Tune & Clean	0					0								0.00							
Htg. Sys./WH Other	0					0								0.00							
Space Heater Repl	0					0								0.00							
Air Conditioning Work	0					0								0.00							
Water Heater Repair	0					0								0.00							
Refrigerator Coil Clear	0					0								0.00							
Unspecified Utility Meas	0					0								0.00							
Asbestos Abatement	0					0								0.00							
CO Detector	0					0								0.00							
Smoke Detector	0					0								0.00							
Fuses	0					0								0.00							
Htg Sys Safety Check	0					0								0.00							
Exhaust Ventilator	0					0								0.00							
Health/Safety Repair	0					0								0.00							
Health/Safety Other	0					0								0.00							
Consumables	0					0								0.00							
Preservation	0					0								0.00							
Roof Repairs	0					0								0.00							
General Repairs	9					1,215								135.02							
Evaluator Labor	0					0								0.00							
Inspector Labor	0					0								0.00							
Eval/Insp Labor	0					0								0.00							
Meter Refrig (no action)	0					0								0.00							
Meter Freezer (no action)	0					0								0.00							
Support	39					11,784								302.15							
Landlord Contr Misc	0					0								0.00							
Landlord Contr Furnace	0					0								0.00							
Landlord Contr DHW	0					0								0.00							
Client Contr Misc	0					0								0.00							
Client Contr Repl	0					0								0.00							
Warehouse	0					0								0.00							
Unspecified	0					0								0.00							
Total Reported Materials, Labor, and Support Costs						250,360															
Utility Expenditures for Administration						9,															

Aquila Networks - PNG
Calendar Year 2004 Estimates
Fuel and Demand Impacts For All Customer Households From All of Funding Sources

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Estimated First-Year Savings					Average per Treated Household							
						Electricity					Gas		Electricity			Gas		
Measure	Total	Electric	Gas	Cooling	Heating	Summer kW	Winter kWh	Summer kWh	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Summer kW	Winter kWh	Annual kWh	Pk-Day therms	Annual therms	
OVERALL	275	0	275			0.0	0.0			0	685	67,709	-	-	-	2.492	246	
Shell & Htg. Sys.	274	0	274	0	0	0.0	0	0.0	0	0	668	63,737	-	-	-	2.436	233	
Wall Insul.	166	0	166	0	0	0.00	0	0.00	0	0	197	18,765	-	-	-	1.185	113	
Ceiling Insul.	241	0	241	0	0	0.00	0	0.00	0	0	118	11,356	-	-	-	0.492	47	
Infil. Reduction	262	0	262	0	0	0.00	0	0.00	0	0	113	10,735	-	-	-	0.430	41	
Found./Crawl. Insul.	85	0	85	0	0	0.00	0	0.00	0	0	41	3,879	-	-	-	0.480	46	
Bandjoist Insul.	82	0	82	-	0	0.00	0	0.00	0	0	5	496	-	-	-	0.063	6	
Hi-Eff Htg Sys Repl	89	0	89	-	0	0.00	0	0.00	0	0	145	13,916	-	-	-	1.625	156	
Std-Eff Htg Sys Repl	46	0	46	-	0	0.00	0	0.00	0	0	49	4,589	-	-	-	1.063	100	
Electric Htg Sys Repl	0	0	0	-	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	
Other Htg Sys Repl	0	0	0	-	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	
				Number of Measures by Fuel Type														
	Total	Electric	Gas	Total	Electric	Gas	Summer kW	Winter kW		Annual kWh	Pk-Day therms	Annual therms	Summer kW	Winter kW		Annual kWh	Pk-Day therms	Annual therms
Water Heating	172	0	172	255	0	255	0.0	0.0		0	17.8	3,973	-	-	-	0.104	23	
Temp. Reduct.	0	0	0				0.00	0.00		0	0.0	0	-	-	-	-	-	
WH Wrap	5	0	5				0.00	0.00		0	0.1	35	-	-	-	0.020	7	
Pipe Insul.	126	0	126				0.00	0.00		0	1.8	614	-	-	-	0.014	5	
LF Showerhead	56	0	56	61	0	61	0.00	0.00		0	4.2	1,284	-	-	-	0.075	23	
Faucet Aerator	87	0	87	146	0	146	0.00	0.00		0	0.8	243	-	-	-	0.009	3	
Std-Eff Wtr Htr Repl.	23	0	23	23	0	23	0.00	0.00		0	5.0	822	-	-	-	0.219	36	
Hi-Eff Wtr Htr Repl.	21	0	21	25	0	25	0.00	0.00		0	6.0	975	-	-	-	0.284	46	
Lighting	0	0		0	0		0.0	0.0		0	-	-	-	-	-	-	-	
Capsylite (42W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
Capsylite (52W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
Capsylite (72W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
Capsylite, unknown	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (5W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (7W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (9W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (11W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (15W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (18W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (20W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (23W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (25W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL (30W)	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
CFL, unknown	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
Waterbed Mattress Pad	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-	-	-	-	-	
King	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-	-	-	-	-	
Queen	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-	-	-	-	-	
Double	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-	-	-	-	-	
Single	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-	-	-	-	-	
Unknown	0	0	0	0	0	0	0.00	0.00		0	0.0	0	-	-	-	-	-	
Refrigerator/Freezer	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
Refrigerator Removal	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
Refrigerator Exchange	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
Freezer Removal	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	
Freezer Exchange	0	0		0	0		0.00	0.00		0	-	-	-	-	-	-	-	

MidAmerican Energy
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Average Estimated First Year Measure Cost and Savings									
	Total	Electric	Gas	Cooling	Heating		Summer kW	Electricity kWh	Winter kWh	Annual kWh	Pk-Day therms	Annual therms	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annual kWh	Pk-Day therms	Annual therms		
OVERALL	605	490	493			1,109,830	80.1		68.7		394,156	1,073	103,377	1834.43	0.104	0.095		804	2.176	210	
Shell & Htg. Sys.	577	459	484	415	371	948,210	47.9	57,763	29.6	46,252	104,015	1,047	97,110	1643.35	0.115	139	0.080	125	227	2.163	201
Wall Insul.	380	318	315	269	254	284,585	20.49	24,707	14.28	22,142	46,849	440	40,815	748.91	0.076	92	0.056	87	147	1.396	130
Ceiling Insul	504	416	418	351	335	240,622	27.05	32,624	9.98	15,822	48,446	215	19,915	477.42	0.077	93	0.030	47	116	0.514	48
Infl. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Found./Crawl. Insul.	205	159	169	146	125	76,372	0.36	432	4.71	7,229	7,661	79	7,239	372.55	0.002	3	0.038	58	48	0.466	43
Bandjoist Insul.	180	132	177	-	132	13,939	0.00	0	0.67	1,058	1,058	12	1,129	77.44	-	-	0.005	8	8	0.069	6
Hi-Eff Htg Sys Repl	167	0	167	-	0	332,693	0.00	0	0.00	0	0	301	28,012	1992.17	-	-	-	-	-	1.805	168
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas		Summer kW	Winter kWh	Annual kWh	Pk-Day therms	Annual therms		Summer kW	Winter kWh	Annual kWh	Pk-Day therms	Annual therms			
Water Heating	351	29	322	378	29	349	34,269	0.0	0.3	14,769	26.0	6,268	97.63	0.000	0.009	509	0.081	19			
Temp. Reduct.	4	0	4				0	0.00	0.00	0	0.2	73	0.00	-	-	-	-	-	0.053	18	
WH Wrap	41	7	34				737	0.00	0.00	1,684	1.1	388	17.97	0.000	0.000	241	0.033	11			
Pipe Insul.	278	21	257				1,928	0.00	0.00	2,065	3.9	1,346	6.93	0.000	0.000	98	0.015	5			
LF Showerhead	91	10	81	96	11	85	691	0.00	0.17	7,448	6.0	1,849	7.60	0.000	0.017	745	0.074	23			
Faucet Aerator	133	9	124	222	13	209	621	0.00	0.01	601	1.4	416	4.67	0.000	0.002	67	0.011	3			
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Hi-Eff Wtr Htr Repl.	60	5	55	60	5	55	30,291	0.00	0.07	2,971	13.5	2,195	504.86	0.000	0.015	594	0.245	40			
Lighting	326	326		1,625	1,625		14,123	9.5	17.6	90,876			43.32	0.029	0.054	279					
Capsy lite (42W)	2	2		2	2		17	0.01	0.01	50	-	-	8.50	0.003	0.005	25	-	-	-	-	-
Capsy lite (52W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
Capsy lite (72W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
Capsy lite, unknown	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
CFL (5W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
CFL (7W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
CFL (9W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
CFL (11W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
CFL (15W)	59	59		278	278		2,355	1.18	2.19	11,263	-	-	39.92	0.020	0.037	191	-	-	-	-	-
CFL (18W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
CFL (20W)	57	57		259	259		2,495	1.26	2.33	12,018	-	-	43.78	0.022	0.041	211	-	-	-	-	-
CFL (23W)	199	199		890	890		6,875	5.42	10.02	51,625	-	-	34.55	0.027	0.050	259	-	-	-	-	-
CFL (25W)	54	54		147	147		1,722	1.12	2.07	10,655	-	-	31.88	0.021	0.038	197	-	-	-	-	-
CFL (30W)	37	37		49	49		658	0.55	1.02	5,265	-	-	17.80	0.015	0.028	142	-	-	-	-	-
CFL, unknown	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
King	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Queen	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Double	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Single	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Unknown	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Refrigerator/Freezer	205	205		228	228		113,226	22.69	21.22	184,496	-	-	552.33	0.111	0.103	900					
Refrigerator Removal	1	1		1	1		100,031	19.49	18.23	158,480	-	-	20.00	0.126	0.117	1,021	-	-	-	-	-
Refrigerator Exchange	187	187		187	187		13,177	3.07	2.87	24,995	-	-	329.42	0.077	0.072	625	-	-	-	-	-
Freezer Removal	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
Freezer Exchange	40	40		40	40		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	-
Costs for Measures Without Energy Impacts Installed in 608 Total Households with Spending and/or Energy Impacts:																					
Total 149,691																					
Unspecified Insul.	6						719						119.80								
Duct Insulation	0						0						0.00								
Duct Sealing	24						526						21.94								
Damming Material	0						0						0.00								
Htg. Sys. Tune & Clean	0						0						0.00								
Htg. Sys./WH Other	0						0						0.00								
Space Heater Repl	0						0						0.00								
Air Conditioning Work	0						0						0.00								
Water Heater Repair	0						0						0.00								
Refrigerator Coil Clear	0						0						0.00								
Unspecified Utility Meas	0						0						0.00								
Asbestos Abatement	0						0						0.00								
CO Detector	0						0						0.00								
Smoke Detector	0						0						0.00								
Fuses	0						0						0.00								
Htg Sys Safety Check	0						0						0.00								
Exhaust Ventilator	0						0						0.00								
Health/Safety Repair	0						0						0.00								
Health/Safety Other	3						393						130.97								
Consumables	0						0						0.00								
Preservation	0						0						0.00								
Roof Repairs	0						0						0.00								
General Repairs	63						11,898						188.86								
Evaluator Labo	0						0						0.00								
Inspector Labor	0						0						0.00								
Eval/Insp Labor	0						0						0.00								
Meter Refrig (no action)	0						0						0.00								
Meter Freezer (no action)	0						0						0.00								
Support	584						136,010						232.89								
Landlord Contr Misc	0						0						0.00								
Landlord Contr Furnace	0						0						0.00								
Landlord Contr DHW	0						0														

MidAmerican Energy
Calendar Year 2004 Estimates
Fuel and Demand Impacts For All Customer Households From All of Funding Sources

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Estimated First-Year Savings Electricity					Average per Treated Household									
	Total	Electric	Gas	Cooling	Heating	Summer kW	Summer kWh	Winter kW	Winter kWh	Annual kWh	Gas Pk-Day therms	Gas Annual therms	Electric Summer kW	Electric Summer kWh	Electric Winter kW	Electric Winter kWh	Electric Annual kWh	Gas Pk-Day therms	Gas Annual therms	
OVERALL	930	749	756			155.2		150.8		799,572	2,459	236,544	0.117		0.110		1,068	3.252	313	
Shell & Htg. Sys.	928	745	753	680	724	91.4	110,234	73.7	114,775	225,009	2,395	222,917	0.134	162	0.102	159	302	3.181	296	
Wall Insul.	618	517	506	463	516	37.38	45,076	29.14	45,565	90,641	776	72,356	0.081	97	0.056	88	175	1.534	143	
Ceiling Insul.	797	660	643	598	660	47.46	57,243	26.06	40,687	97,930	355	33,189	0.079	96	0.039	62	148	0.553	52	
Infil. Reduction	897	669	732	668	14	5.99	7,218	7.27	11,332	18,550	413	38,228	0.009	11	0.519	809	28	0.564	52	
Found./Crawl. Insul.	356	274	291	253	274	0.58	698	9.58	14,649	15,346	145	13,344	0.002	3	0.035	53	56	0.498	46	
Bandjoist Insul.	369	287	312	-	287	0.00	0	1.62	2,542	2,542	22	2,058	-	-	0.006	9	9	0.071	7	
Hi-Eff Htg Sys Repl	298	0	298	-	0	0.00	0	0.00	0	0	576	53,728	-	-	-	-	-	1.933	180	
Std-Eff Htg Sys Repl	79	0	79	-	0	0.00	0	0.00	0	0	105	9,764	-	-	-	-	-	1.335	124	
Electric Htg Sys Repl	0	0	0	-	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-	-	
Other Htg Sys Repl	1	0	1	-	0	0.00	0	0.00	0	0	3	250	-	-	-	-	-	2.575	250	
	Total	Electric	Gas	Number of Measures by Fuel Type			Summer kW		Winter kW		Annual kWh	Gas Pk-Day therms	Gas Annual therms	Summer kW		Winter kW		Annual kWh	Gas Pk-Day therms	Gas Annual therms
Water Heating	616	51	565	805	82	723	0.0		0.5		29,451	63.6	13,682	0.000		0.010		577	0.113	24
Temp. Reduct.	5	0	5				0.00		0.00		0	0.2	87	-		-		-	0.050	17
WH Wrap	78	15	63				0.00		0.01		3,608	2.1	734	0.000		0.000		241	0.034	12
Pipe Insul.	458	39	419				0.00		0.01		3,836	6.3	2,201	0.000		0.000		98	0.015	5
LF Showerhead	147	21	126	157	25	132	0.00		0.32		13,961	9.4	2,890	0.000		0.015		665	0.075	23
Faucet Aerator	249	24	225	446	47	399	0.00		0.04		1,753	2.4	734	0.000		0.002		73	0.011	3
Std-Eff Wtr Htr Repl.	85	4	81	85	4	81	0.00		0.07		2,748	19.7	3,209	0.000		0.017		687	0.243	40
Hi-Eff Wtr Htr Repl.	90	5	85	117	6	111	0.00		0.09		3,545	23.5	3,827	0.000		0.018		709	0.276	45
Lighting	591	591		3,021	3,021		18.2		33.6		173,347	-	-	0.031		0.057		293	-	-
Capsylite (42W)	7	7		30	30		0.06		0.10		536	-	-	0.008		0.015		77	-	-
Capsylite (52W)	3	3		4	4		0.01		0.01		69	-	-	0.002		0.004		23	-	-
Capsylite (72W)	12	12		12	12		0.04		0.07		355	-	-	0.003		0.006		30	-	-
Capsylite, unknown	0	0		0	0		0.00		0.00		0	-	-	-		-		-	-	-
CFL (5W)	0	0		0	0		0.00		0.00		0	-	-	-		-		-	-	-
CFL (7W)	0	0		0	0		0.00		0.00		0	-	-	-		-		-	-	-
CFL (9W)	0	0		0	0		0.00		0.00		0	-	-	-		-		-	-	-
CFL (11W)	1	1		1	1		0.00		0.01		29	-	-	0.003		0.006		29	-	-
CFL (15W)	97	97		415	415		1.83		3.38		17,404	-	-	0.019		0.035		179	-	-
CFL (18W)	0	0		0	0		0.00		0.00		0	-	-	-		-		-	-	-
CFL (20W)	120	120		558	558		2.79		5.15		26,534	-	-	0.023		0.043		221	-	-
CFL (23W)	337	337		1,477	1,477		9.16		16.92		87,236	-	-	0.027		0.050		259	-	-
CFL (25W)	111	111		444	444		3.44		6.36		32,790	-	-	0.031		0.057		295	-	-
CFL (30W)	56	56		80	80		0.88		1.63		8,393	-	-	0.016		0.029		150	-	-
CFL, unknown	0	0		0	0		0.00		0.00		0	-	-	-		-		-	-	-
Waterbed Mattress Pad	2	1	2	3	1	2	0.00		0.29		766	-0.3	-55	0.000		0.290		766	-0.166	-27
King	0	0	0	0	0	0	0.00		0.00		0	0.0	0	-		-		-	-	-
Queen	0	0	0	0	0	0	0.00		0.00		0	0.0	0	-		-		-	-	-
Double	0	0	0	0	0	0	0.00		0.00		0	0.0	0	-		-		-	-	-
Single	0	0	0	0	0	0	0.00		0.00		0	0.0	0	-		-		-	-	-
Unknown	2	1	2	3	1	2	0.00		0.29		766	-0.3	-55	0.000		0.290		766	-0.166	-27
Refrigerator/Freezer	369	369		490	490		45.63		42.66		370,998	-	-	0.124		0.116		1,005	-	-
Refrigerator Removal	6	6		6	6		0.75		0.70		6,125	-	-	0.126		0.117		1,021	-	-
Refrigerator Exchange	306	306		327	327		32.71		30.59		265,968	-	-	0.107		0.100		869	-	-
Freezer Removal	5	5		5	5		0.44		0.41		3,563	-	-	0.088		0.082		713	-	-
Freezer Exchange	144	144		152	152		11.73		10.96		95,342	-	-	0.081		0.076		662	-	-

5. DETAILED SPENDING AND IMPACT PROFILES BY AGENCY

This section provides tables of spending and impacts by agency for all expenditures.

Energy impacts were estimated according to the statewide algorithms, which include agency-specific adjustments beginning this year. See notes regarding waterbed mattress and water heater measure savings at the beginning of Section 4.

Community Opportunity
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

Measure	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas					Spending on Materials & Labor (\$)	Average per Treated Household					Gas						
	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating		Summer kW	Electricity		Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Summer kW		Electricity		Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu				
											Winter kW	Winter kWh									Winter kWh	Winter kWh							Winter kWh			
OVERALL	70	70	70	70	4	1	0		589,993	40.2		22.9		146,112	404	38,412	2,320	329	0	8428.47	0.291		0.163		2,087	5,770	549	580	329	-		
Shell & Htg. Sys.	70	70	65	4	1	0	68	70	538,518	28.1	29,533	8.0	12,554	42,088	401	37,602	2,320	329	0	7693.12	0.413	434	0.114	179	601	6,167	578	580	329	-		
Wall Insul.	49	49	46	3	0	0	48	49	134,852	7.70	8,045	4.01	6,310	14,355	122	11,474	804	0	0	2752.07	0.160	168	0.082	129	293	2,652	249	268	-	-		
Ceiling Insul.	70	70	65	4	1	0	68	70	163,645	16.69	17,649	2.59	4,069	21,718	78	7,330	476	41	0	2337.79	0.245	260	0.037	58	310	1,203	113	119	41	-		
Infltr. Reduction	69	67	64	4	1	0	67	0	23,434	2.61	2,695	0.00	0	2,695	48	4,520	180	17	0	339.63	0.039	40	-	40	0.753	71	45	17	-	-		
Found./Crawl. Insul	35	35	32	2	1	0	34	35	30,111	1.05	1,144	1.34	2,093	3,237	41	3,814	195	54	0	860.31	0.031	34	0.038	60	92	1,274	119	97	54	-		
Bandjoist Insul.	15	15	10	4	1	0	-	15	3,566	0.00	0	0.05	83	83	1	102	45	7	0	237.73	-	-	0.004	6	6	0.109	10	11	7	-	-	
Hi-Eff Htg Sys Repl	30	0	27	2	1	0	-	0	143,662	0.00	0	0.00	0	0	83	7,825	620	210	0	4788.73	-	-	-	-	-	3,087	290	310	210	-		
Std-Eff Htg Sys Repl	9	0	9	0	0	0	-	0	39,248	0.00	0	0.00	0	0	27	2,537	0	0	0	4360.89	-	-	-	-	-	3,029	282	-	-	-		
Electric Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
Other Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu		
Water Heating	68	0	68	0	0	0	6	0	6	0	0	0	0	3,499	0.0	0.0	0	3.1	810	0	0	0	51.46	-	-	-	0.045	12	-	-	-	
Temp. Reduct.	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.1	22	0	0	0	0.00	-	-	-	0.064	22	-	-	-	
WH Wrap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0.00	-	-	-	-	-	-	-	-		
Pipe Insul.	68	0	68	0	0	0	0	0	733	0.00	0.00	0.00	0	0	0.00	0.00	0	1.6	561	0	0	0	10.77	-	-	-	0.024	8	-	-	-	
LF Showerhead	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0	0	0.00	-	-	-	-	-	-	-	-		
Faucet Aerator	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0	0	0.00	-	-	-	-	-	-	-	-		
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0	0	0.00	-	-	-	-	-	-	-	-		
Hi-Eff Wtr Htr Repl.	3	0	3	0	0	0	6	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	1.4	227	0	0	0	92.2	-	-	-	0.464	76	-	-	-	
Lighting	70	70					564	564	5,596	3.9		7.1		36,812	-	-	-	-	-	-	79.94	0.055		0.102		526	-	-	-	-	-	
Capsylite (42W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
Capsylite (52W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
Capsylite (72W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
Capsylite, unknown	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL (5W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL (7W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL (9W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL (11W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL (15W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL (18W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL (20W)	10	10					80	80	728	0.46		0.85		4,399	-	-	-	-	-	-	72.80	0.046		0.085		440	-	-	-	-	-	
CFL (23W)	60	60					484	484	4,868	3.40		6.29		32,413	-	-	-	-	-	-	81.13	0.057		0.105		540	-	-	-	-	-	
CFL (25W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL (30W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
CFL, unknown	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
Waterbed Mattress Pad	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.00	-	-	-	-	-	-	-	-		
King	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.00	-	-	-	-	-	-	-	-		
Queen	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.00	-	-	-	-	-	-	-	-		
Double	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.00	-	-	-	-	-	-	-	-		
Single	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.00	-	-	-	-	-	-	-	-		
Unknown	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.00	-	-	-	-	-	-	-	-		
Refrigerator/Freezer	34	34					84	84	42,380	8.27		7.73		67,213	-	-	-	-	-	-	1246.47	0.243		0.227		1,977	-	-	-	-	-	
Refrigerator Removal	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
Refrigerator Exchange	28	28					56	56	31,610	5.99		5.60		48,674	-	-	-	-	-	-	1128.93	0.214		0.200		1,738	-	-	-	-	-	
Freezer Removal	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-		
Freezer Exchange	14	14					28	28	10,770	2.28		2.13		18,539	-	-	-	-	-	-	769.29	0.163		0.152		1,324	-	-	-	-	-	
Costs for Measures Without Energy Impacts Installed in 70 Total Households with Spending and/or Energy Impacts:																																
Total									217,653																							
Unspecified Insul	60								13,782												229.71											
Duct Insulation	0								0												0.00											
Duct Sealing	58								1,544												26.63											
Damming Material	0								0												0.00											
Htg. Sys. Tune & Clean	67								13,106												195.61											
Htg. Sys./WH Other	25								10,611												424.43											
Space Heater Repl	1								3,200												32											

HACAP
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use		Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings												
									Average per Treated Household																						
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Summer kWh	Electricity kW	Winter kWh	Annual kWh	Pk-Day therms	Gas Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kWh	Electricity kW	Winter kWh	Annual kWh	Pk-Day therms	Gas Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu			
OVERALL	199	199	177	27	3	0			1,169,508	53.0		70.4	400,695		5876.92	9,636	1,144	0	4772.62	0.140		0.176	2,014	3,997	386	357	381	-			
Shell & Htg. Sys.	198	196	169	26	3	0	165	187	944,977	14.5	16,201	16.9	26,005	42,206	681	62,505	9,231	1,144	0	4772.61	0.088	98	0.090	139	215	4,029	370	355	381	-	
Wall Insul.	93	93	82	9	2	0	77	93	234,437	5.22	6,016	8.28	12,757	18,773	204	18,722	1,962	310	0	2520.83	0.068	78	0.089	137	202	2,486	228	218	155	-	
Ceiling Insul.	133	133	115	16	2	0	110	133	166,028	4.81	5,331	4.17	6,436	11,767	95	8,724	1,561	125	0	1248.33	0.044	48	0.031	48	88	0,825	76	98	63	-	
Infl. Reduction	197	164	168	26	3	0	164	0	157,887	3.22	3,566	0.00	0	3,566	161	14,747	2,128	204	0	801.46	0.020	22	-	-	22	0,960	88	82	68	-	
Found./Crawl. Insul.	97	97	82	13	2	0	81	97	152,832	1.23	1,288	4.07	6,240	7,528	76	6,912	1,646	52	0	1575.55	0.015	16	0.042	64	78	0,923	84	127	26	-	
Bandjoist Insul.	76	76	66	9	1	0	-	76	14,665	0.00	0	0.37	572	572	8	759	112	9	0	192.96	-	-	0.005	8	8	0,125	12	12	9	-	
Hi-Eff Htg Sys Repl	33	0	28	3	2	0	-	0	123,940	0.00	0	0.00	0	0	84	7,733	982	443	0	3755.76	-	-	-	-	-	2,985	276	327	222	-	
Std-Eff Htg Sys Repl	31	0	26	5	0	0	-	0	95,188	0.00	0	0.00	0	0	54	4,908	839	0	0	3070.57	-	-	-	-	-	2,058	189	168	-	-	
Electric Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	
Other Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu	
Water Heating	144	26	109	9	0	0	576	94	436	46	0	0	69,932	0.0	0.3	18,706	25.5	5,790	460	0	0	485.64	0.000	0.012	719	0.243	53	51			
Temp. Reduct.	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	
WH Wrap	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	
Pipe Insul.	57	12	41	4	0	0	684	0.00	0.00	0.00	0.00	0.00	2,360	1.1	386	41	0	0	0	12.00	0.000	0.000	0.000	197	0.027	9	10	-	-		
UF Showerhead	46	8	32	6	0	0	7,668	0.00	0.17	7,668	0.00	0.00	16,633	4.0	1,221	151	0	0	0	16.00	0.000	0.022	958	0.124	38	25	-	-			
Faucet Aerator	99	19	73	7	0	0	358	70	260	28	0	0	939	0.00	0.07	3,138	1.6	500	26	0	9.49	0.000	0.004	165	0.022	7	4	-	-		
Std-Eff Wtr Htr Repl.	43	3	37	3	0	0	86	6	74	6	0	0	49,435	0.00	0.03	4,122	14.5	2,732	242	0	1149.64	0.000	0.011	1,374	0.391	74	81	-	-		
Hi-Eff Wtr Htr Repl.	12	1	11	0	0	0	26	2	24	0	0	0	18,110	0.00	0.04	1,418	5.3	950	0	0	1509.16	0.000	0.035	1,418	0.482	86	-	-	-		
	188	188					4,100	4,100		37,037	18.2	33.7	173,686	-	-	-	-	-	-	197.01	0.097	0.179	924	-	-	-	-	-	-	-	
Capsytle (42W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-		
Capsytle (52W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-		
Capsytle (72W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-		
Capsytle, unknown	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-		
CFL (5W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-		
CFL (7W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-		
CFL (9W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-															

TRAIN
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings											
																							Average per Treated Household											
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating				Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu			
OVERALL	151	151	143	8	1	0						919,583	72.0		32.1	227,746	860	82,470	4,397	550	0	6089.95	0.233		0.101	1,508	6,011	577	550	550	-			
Shell & Htg. Sys.	151	151	143	7	1	0	141	150				841,436	58.4	60,223	15.1	22,953	83,176	829	75,024	3,683	550	0	5572.42	0.414	427	0.101	153	551	5,800	525	526	550	-	
Wall Insul.	105	105	100	4	1	0	95	105				219,745	24.16	25,325	8.73	13,252	38,577	268	24,287	1,361	230	0	2092.81	0.254	267	0.083	126	367	2,684	243	340	230	-	
Ceiling Insul	116	116	110	5	1	0	106	116				107,985	31.80	32,339	3.35	5,083	37,421	103	9,343	418	61	0	930.90	0.300	305	0.029	44	323	0,940	85	84	61	-	
Infl. Reduction	149	140	139	7	1	0	140	0				110,541	1.68	1,703	0.00	0	1,703	156	14,133	918	78	0	741.89	0.012	12	-	12	1,125	102	131	78	-	-	
Found./Crawl. Insul	80	80	76	4	0	0	78	80				72,260	0.77	857	2.66	4,031	4,888	72	6,525	471	0	0	903.24	0.010	11	0.033	50	61	0,951	86	118	-	-	
Bandjoist Insul.	82	82	78	3	1	0	-	82				16,532	0.00	0	0.39	587	587	11	983	43	8	0	201.60	-	-	0.005	7	7	0,139	13	14	8	-	
Hi-Eff Htg Sys Repl	45	0	45	0	0	0	-	0				201,772	0.00	0	0.00	0	0	163	14,779	0	0	0	4483.82	-	-	-	-	-	3,627	328	-	-	-	
Std-Eff Htg Sys Repl	27	0	24	2	1	0	-	0				112,602	0.00	0	0.00	0	0	55	4,973	473	172	0	4170.43	-	-	-	-	-	2,289	207	236	172	-	
Electric Htg Sys Repl	0	0	0	0	0	0	-	0				0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	
Other Htg Sys Repl	0	0	0	0	0	0	-	0				0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other		Summer kW		Winter kW		Annua kWh	Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW		Winter kW		Annua kWh	Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu
Water Heating	145	24	116	5	0	0	640	116	494	30	0	0	38,473	0.0	0.5		28,533	30.2	7,447	714	0	0	265.33	0.000		0.019		1,189	0.261	64	143	-	-	
Temp. Reduct.	0	0	0	0	0	0							0	0.00	0.00		0	0.0	0	0	0	0	0.00	-		-	-	-	-	-	-	-	-	
WH Wrap	40	5	34	1	0	0							1,227	0.00	0.00		2,406	2.2	754	24	0	0	30.66	0.000		0.001		481	0.064	22	24	-	-	
Pipe Insul.	86	13	70	3	0	0							1,012	0.00	0.01		2,557	2.1	737	35	0	0	11.77	0.000		0.000		197	0.030	11	12	-	-	
LF Showerheac	78	18	55	5	0	0	158	36	112	10	0	0	1,220	0.00	0.34		15,025	8.8	2,712	414	0	0	15.64	0.000		0.019		835	0.160	49	83	-	-	
Faucet Aerator	119	21	93	5	0	0	404	72	316	16	0	0	1,097	0.00	0.07		3,006	2.0	610	61	0	0	9.22	0.000		0.003		143	0.021	7	12	-	-	
Std-Eff Wtr Htr Repl.	17	3	12	2	0	0	34	6	24	4	0	0	17,020	0.00	0.00		4,122	5.1	991	180	0	0	1001.20	0.000		0.000		1,374	0.422	83	90	-	-	
Hi-Eff Wtr Htr Repl.	18	1	17	0	0	0	44	2	42	0	0	0	16,897	0.00	0.04		1,418	10.1	1,643	0	0	0	938.72	0.000		0.035		1,418	0.592	97	-	-	-	
Lighting	144	144					600	600					5,564	4.2	7.8		40,214	-	-	-	-	-	38.64	0.029		0.054		279	-	-	-	-	-	
Capsylite (42W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
Capsylite (52W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
Capsylite (72W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
Capsylite, unknown	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL (5W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL (7W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL (9W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL (11W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL (15W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL (18W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL (20W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL (23W)	143	143					596	596					5,444	4.19	7.74		39,914	-	-	-	-	-	38.07	0.029		0.054		279	-	-	-	-	-	-
CFL (25W)	1	1					4	4					120	0.03	0.06		300	-	-	-	-	-	120.00	0.032		0.058		300	-	-	-	-	-	-
CFL (30W)	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
CFL, unknown	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
Waterbed Mattress Pad	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.0	0.0	0.0	0.00	-		-	-	-	-	-	-	-	-	
King	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.0	0.0	0.0	0.00	-		-	-	-	-	-	-	-	-	
Queen	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.0	0.0	0.0	0.00	-		-	-	-	-	-	-	-	-	
Double	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.0	0.0	0.0	0.00	-		-	-	-	-	-	-	-	-	
Single	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.0	0.0	0.0	0.00	-		-	-	-	-	-	-	-	-	
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.0	0.0	0.0	0.00	-		-	-	-	-	-	-	-	-	
Refrigerator/Freezer	41	41					92	92					34,110	9.32	6.72		75,823	-	-	-	-	-	831.95	0.227		0.213		1,849	-	-	-	-	-	-
Refrigerator Remova	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
Refrigerator Exchang	36	36					72	72					28,104	7.70	7.20		62,581	-	-	-	-	-	780.67	0.214		0.200		1,738	-	-	-	-	-	-
Freezer Remova	0	0					0	0					0	0.00	0.00		0	-	-	-	-	-	0.00	-		-	-	-	-	-	-	-	-	
Freezer Exchang	10	10					20	20					6,006	1.63	1.52		13,242	-	-	-	-	-	600.60	0.163		0.152		1,324	-	-	-	-	-	-
Costs for Measures Without Energy Impacts Installed in 151 Total Households with Spending and/or Energy Impacts:																																		
Total													765,584																					
Unspecified Insul	144												58,666						407.40															
Duct Sealing	138												32,732						237.19															
Damming Materia	0												0						0.00															
Htg. Sys. Tune & Clean	131												31,195						238.13															
Htg. Sys./WH Other	48												16,502						343.78															
Space Heater Repl	0												0						0.00															
Air Conditioning Work	0												0						0.00															
Water Heater Repai	7												863						1232.28															

MATURA
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

[illegible]

MICA
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings Average per Treated Household													
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Summer kW	kWh	Electricity Winter kW	kWh	Annual kWh	Pk-Day therms	Gas Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	kWh	Electricity Winter kW	kWh	Annual kWh	Pk-Day therms	Gas Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu						
OVERALL	109	109	107	3	0	0			855,523	30.4		45.5		211,119	591	59,579	1,634	0	0	7848.83	0.147		0.209		1,937	5,526	557	545	-	-						
Shell & Htg. Sys.	108	107	103	3	0	0	95	106	780,170	14.1	16,246	23.0	36,995	53,241	573	54,759	1,634	0	0	7223.80	0.148	171	0.217	349	498	5,562	532	545	-	-						
Wall Insul.	75	75	73	1	0	0	65	75	222,166	0.05	60	9.66	15,519	15,579	192	18,417	234	0	0	2962.21	0.001	1	0.129	207	208	2,636	252	234	-	-						
Ceiling Insul.	85	85	81	2	0	0	75	85	155,460	13.27	15,350	6.27	10,070	25,420	88	8,453	316	0	0	1828.94	0.177	205	0.074	118	299	1,091	104	158	-	-						
Infl. Reduction	102	90	97	3	0	0	90	2	158,100	0.58	663	3.10	4,966	5,649	106	24	224	0	0	1550.00	0.006	7	1.548	2,483	63	1,082	104	75	-	-						
Found./Crawl. Insul.	69	59	67	1	0	0	51	59	84,781	0.16	173	3.48	5,580	5,753	51	4,876	369	0	0	1436.96	0.003	3	0.059	95	98	0,897	86	369	-	-						
Bandjoist Insul.	69	69	67	1	0	0	-	69	23,281	0.00	0	0.52	841	841	7	715	12	0	0	337.40	-	-	0.008	12	12	0.112	11	12	-	-						
Hi-Eff Htg Sys Repl	35	0	34	1	0	0	-	0	100,525	0.00	0	0.00	0	0	107	10,189	480	0	0	2872.15	-	-	-	-	-	3,139	300	480	-	-						
Std-Eff Htg Sys Repl	8	0	8	0	0	0	-	0	35,858	0.00	0	0.00	0	0	21	1,963	0	0	0	44																

**Mid-Sioux
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures**

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings Average per Treated Household									
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Summer kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu				
OVERALL	85	85	76	13	3	0			\$22,532	41.8		55.5	242,093			6147.44			0													
Shell & Htg. Sys.	84	82	62	13	3	0	76	70	438,146	23.4	25.448	29.8	48,537	73,985	379	37,030	8,695	1,731	0	5216.03	0.308	335	0.426	693	902	6.105	597	669	577	-		
Wall Insul.	43	43	34	5	3	0	40	43	86,459	2.81	3,160	6.95	11,376	14,536	103	10,059	2,018	567	0	2010.68	0.070	79	0.162	265	338	3.017	296	404	189	-		
Ceiling Insul.	65	65	47	10	3	0	60	65	96,180	19.47	21,051	14.33	23,464	44,516	54	5,289	1,471	261	0	1479.70	0.324	351	0.220	361	685	1,150	113	147	87	-		
Infil. Reduction	77	71	56	13	3	0	70	5	24,453	1.25	1,347	1.62	2,601	3,947	45	4,451	726	230	0	317.57	0.018	19	0.323	520	56	0,812	79	56	77	-		
Found./Crawl. Insul.	23	23	18	2	2	0	21	23	16,078	-0.12	(110)	6.12	9,821	9,711	14	1,332	595	55	0	698.06	-0.005	(5)	0.286	427	422	0,755	74	297	27	-		
Bandjoist Insul.	23	23	16	4	0	0	-	23	3,234	0.00	0	0.78	1,275	1,275	2	229	64	0	0	140.61	-	-	0.034	55	55	0,145	14	16	-	-		
Hi-Eff Htg Sys Repl	48	0	38	8	2	0	-	0	211,742	0.00	0	0.00	0	0	160	15,671	3,822	618	0	4411.28	-	-	-	-	-	4,223	412	478	309	-		
Std-Eff Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
Electric Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
Other Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other	Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu			
Water Heating	72	3	68	1	0	0	174	6	166	2	0	0	11,081	0.0	0.0	4,844	10.2	2,950	115	0	153.90	0.000	0.012	1,615	0.150	43	115	-	-	-		
Temp. Reduct.	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
WH Wrap	32	1	31	0	0	0	0	0	1,088	0.00	0.00	0.00	481	2.2	774	0	0	0	0	34.00	0.000	0.001	481	0.072	25	-	-	-	-	-		
Pipe Insul.	68	1	66	1	0	0	0	0	822	0.00	0.00	0.00	197	2.3	783	13	0	0	0	12.09	0.000	0.000	197	0.034	12	13	-	-	-	-		
UF Showerhead	15	0	15	0	0	0	0	0	276	0.00	0.00	0.00	0	2.3	710	0	0	0	0	18.40	-	-	0.154	47	-	-	-	-	-	-		
Faucet Aerator	33	0	33	0	0	0	128	0	331	0.00	0.00	0.00	0	0.9	264	0	0	0	0	10.03	-	-	0.026	8	-	-	-	-	-	-		
Std-Eff Wtr Htr Repl.	4	2	1	1	0	0	8	4	2,246	0.00	0.00	0.00	2,748	0.6	93	102	0	0	0	1061.55	0.000	0.000	1,374	0.570	93	102	-	-	-	-		
Hi-Eff Wtr Htr Repl.	4	1	3	0	0	0	8	2	4,317	0.00	0.04	0.04	1,418	2.0	327	0	0	0	0	1079.33	0.000	0.035	1,418	0.667	109	-	-	-	-	-		
Lighting	81	81					1,870	1,870	16,171	8.7	16.0		82,601		-	-	-	-	-	198,707	0.107	0.198	1,020		-	-	-	-	-	-		
Capsylite (42W)	8	8					144	144	498	0.26	0.47		2,446		-	-	-	-	-	62.25	0.032	0.059	306		-	-	-	-	-	-		
Capsylite (52W)	3	3					8	8	998	0.01	0.03		138		-	-	-	-	-	332.65	0.005	0.009	46		-	-	-	-	-	-		
Capsylite (72W)	11	11					22	22	2,452	0.07	0.12		633		-	-	-	-	-	222.89	0.006	0.011	58		-	-	-	-	-	-		
Capsylite, unknown	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
CFL (5W)	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
CFL (7W)	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
CFL (9W)	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
CFL (11W)	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
CFL (15W)	3	3					38	38	286	0.14	0.25		1,308		-	-	-	-	-	88.67	0.046	0.085	436		-	-	-	-	-	-		
CFL (18W)	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
CFL (20W)	2	2					22	22	190	0.09	0.17		897		-	-	-	-	-	95.00	0.047	0.087	448		-	-	-	-	-	-		
CFL (23W)	78	78					1,406	1,406	11,402	7.83	14.47		74,581		-	-	-	-	-	146.18	0.100	0.185	956		-	-	-	-	-	-		
CFL (25W)	1	1					12	12	120	0.07	0.13		675		-	-	-	-	-	120.00	0.071	0.131	675		-	-	-	-	-	-		
CFL (30W)	7	7					18	18	250	0.20	0.37		1,924		-	-	-	-	-	35.71	0.029	0.053	275		-	-	-	-	-	-		
CFL- unknown	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
Waterbed Mattress Pad	1	1	1	0	0	0	4	2	2	0	0	0	30	0.00	0.58	1,533	-0.4	-62	0.0	0.0	0.0	30.00	0.000	0.581	1,533	-0.377	-62	-	-	-		
King	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.0	0.0	0.0	0.0	0.00	-	-	-		-	-	-	-	-	-		
Queen	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.0	0.0	0.0	0.0	0.00	-	-	-		-	-	-	-	-	-		
Double	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.0	0.0	0.0	0.0	0.00	-	-	-		-	-	-	-	-	-		
Single	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.0	0.0	0.0	0.0	0.00	-	-	-		-	-	-	-	-	-		
Unknown	1	1	1	0	0	0	4	2	2	0	0	0	30	0.00	0.58	1,533	-0.4	-62	0.0	0.0	0.0	30.00	0.000	0.581	1,533	-0.377	-62	-	-	-		
Refrigerator/Freezer	39	39					104	104	57,100	9.73	9.10		79,130		-	-	-	-	-	1464.09	0.250	0.233	2,029		-	-	-	-	-	-	-	
Refrigerator Remova	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
Refrigerator Exchang	28	28					58	58	36,980	5.99	5.60		48,674		-	-	-	-	-	1320.71	0.214	0.200	1,738		-	-	-	-	-	-	-	
Freezer Remova	0	0					0	0	0	0.00	0.00	0.00	0		-	-	-	-	-	0.00	-	-	-		-	-	-	-	-	-		
Freezer Exchang	23	23					46	46	20,120	3.75	3.50		30,457		-	-	-	-	-	874.77	0.163	0.152	1,324		-	-	-	-	-	-	-	
Costs for Measures Without Energy Impacts Installed in 85 Total Households with Spending and/or Energy Impacts:																																
Total									271,413																							
Unspecified Insul	50								7,902											158.03												
Duct Insulation	0								0											0.00												
Duct Sealing	20								368											18.42												
Damming Materia	0								0											0.00												
Htg. Sys. Tune & Clean	26								3,734											143.62												
Htg. Sys./WH Other	32								27,372											855.36												
Space Heater Repl	0								0											0.00												
Air Conditioning Work	0								0											0.00												
Water Heater Repai	4								1,030											257.38												
Refrigerator Coil Clear	0								0											0.00												
Unspecified Utility Meas	0								0											0.00												
Asbestos Abatement	0								0											0.00												

City of Des Moines
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

	Number of Households with Impacts							Count of Households with Electricity Impacts by End-Use							Estimated First-Year Savings							Average Estimated First Year Measure Cost and Savings Average per Treated Household									
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Summer kWh	Electricity Winter kW	kWh	Annua kWh	Gas Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity Winter kW	kWh	Annua kWh	Gas Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu			
OVERALL	89	89	89	89	0	0	0	88	630,127	32.2	28.2		172,841	859	78,606		0	0	0	7080.08	0.237	0.207		1,942	9.647	883	-	-	-		
Shell & Htg. Sys.	89	89	89	89	0	0	0	88	538,480	15.6	18.849	10.5	15,885	846	76,445		0	0	0	6050.34	0.178	0.119	181	390	9,511	859	-	-	-		
Wall Insul.	75	75	75	0	0	0	0	74	170,518	6.74	8,133	6.88	10,414	324	29,244		0	0	0	2273.57	0.091	0.092	139	247	4,318	390	-	-	-		
Ceiling Insul.	83	83	83	0	0	0	0	82	99,340	10.15	12,243	2.51	3,805	119	10,734		0	0	0	1196.87	0.124	0.030	46	193	1,432	129	-	-	-		
Infltr. Reduction	89	88	89	0	0	0	0	88	64,952	0.86	1,034	0.00	0	138	12,447		0	0	0	729.80	0.010	0.000	12	12	1,549	140	-	-	-		
Foundr/Crawl. Insul	36	36	36	0	0	0	0	36	21,952	-2.12	(2,562)	0.98	1,487	40	3,621		0	0	0	868.78	-0.059	(7.1)	41	(30)	1,114	101	-	-	-		
Bandjoist Insul.	28	28	28	0	0	0	0	28	4,600	0.00	0	0.12	178	178	4	385		0	0	164.29	-	0.004	6	6	0.152	14	-	-	-		
Hi-Eff Htg Sys Repl	43	0	43	0	0	0	0	-	164,450	0.00	0	0.00	0	207	18,710		0														

North Iowa
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

Measure	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings																		
													Spending on Materials & Labor (\$)		Electricity				Gas		Propane		Fuel Oil		Other		Spending on Materials & Labor (\$)		Electricity				Gas		Propane		Fuel Oil		Other		
	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating					Summer kWh	Winter kWh	Annual kWh	Pk-Day therms	Annual therms	gallons	gallons	Mbtu		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	gallons	gallons	Mbtu		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	gallons	gallons	Mbtu			
OVERALL	155	155	106	43	7	0						887,792	53.0	71.4		391,966	582	58,708	24,155	3,638	0	5727.69	0.187	0.249		2,529	5,493	554	562	520	-										
Shell & Htg. Sys.	154	153	102	43	7	0	146	149				689,857	14.1	14,593	29.7	49,848	64,441	576	57,148	24,080	3,638	0	4479.59	0.097	100	0.199	335	421	5,649	560	560	520	-								
Wall Insul.	75	75	55	15	4	0	70	75				162,095	8.27	8,538	12.28	20,584	29,123	155	15,399	3,704	665	0	2161.27	0.118	122	0.164	274	388	2,826	280	247	166	-								
Ceiling Insul.	140	140	91	39	7	0	133	139				171,260	5.47	5,635	9.69	16,201	21,836	128	12,649	5,763	749	0	1223.29	0.041	42	0.070	117	156	1,403	139	148	107	-								
Infl. Reduction	151	143	100	42	7	0	143	2				67,930	-0.22	(221)	6.57	11,096	10,874	136	13,448	6,266	644	0	449.87	-0.002	(2)	3.283	5,548	76	1,357	134	149	92	-								
Found./Crawl. Insul.	43	43	27	14	2	0	40	43				17,299	0.59	641	0.65	1,084	1,725	12	1,236	945	100	0	402.29	0.015	16	0.015	25	40	0,460	46	67	50	-								
Bandjoist Insul.	61	61	38	17	5	0	-	61				8,872	0.00	0	0.53	884	884	5	505	250	47	0	145.44	-	-	0.009	14	14	0.134	13	15	9	-								
Hi-Eff Htg Sys Repl	65	0	42	17	6	0	-	0				248,200	0.00	0	0.00	0	0	137	13,644	6,628	1,434	0	3818.47	-	-	-	-	-	3,264	325	390	239	-								
Std-Eff Htg Sys Repl	3	0	1	2	0	0	-	0				14,200	0.00	0	0.00	0	0	3	267	523	0	4733.33	-	-	-	-	-	2,749	267	-	-	-	-	-	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	0	0	0	-	0				0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	0	0	0	-	0				0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Number of Measures by Fuel Type												Summer kW		Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu		
Water Heating	54	3	50	1	0	0	142	6	134	2	0	0	14,636	0.0	0.0	3,175	6.1	1,560	75	0	0	0	271.03	0.000	0.012	1,058	0.122	31	75	-	-										
Temp. Reduct.	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
WH Wrap	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pipe Insul.	39	2	37	0	0	0	281	0	0	0	0	281	0.00	0.00	0	393	0.9	326	0	0	0	7.22	0.000	0.000	197	0.025	9	-	-	-	-	-	-	-	-	-	-	-	-	-	
LF Showerhead	9	0	9	0	0	0	74	0	0	0	0	74	0.00	0.00	0	1.1	343	0	0	0	0	8.18	-	-	-	0.124	38	-	-	-	-	-	-	-	-	-	-	-	-	-	
Faucet Aerator	34	1	33	0	0	0	96	2	94	0	0	0	148	0.00	0.00	0	34	0.6	176	0	0	0	4.34	0.000	0.001	34	0.017	5	-	-	-	-	-	-	-	-	-	-	-	-	
Std-Eff Wtr Htr Repl.	4	2	1	1	0	0	8	4	2	2	0	0	4,189	0.00	0.03	2,748	0.0	69	75	0	0	1047.23	0.000	0.017	1,374	0.000	69	75	-	-	-	-	-	-	-	-	-	-	-	-	
Hi-Eff Wtr Htr Repl.	8	0	8	0	0	0	20	0	20	0	0	0	9,944	0.00	0.00	0	3.5	646	0	0	0	1243.03	-	-	-	0.433	81	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lighting	135	135					1,366	1,366				10,689	5.8	10.7	55,295	-	-	-	-	-	-	79.18	0.043	0.079	410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Capsylite (42W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Capsylite (52W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Capsylite (72W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Capsylite, unknown	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (5W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (7W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (9W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (11W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (15W)	135	135					1,366	1,366				10,689	5.81	10.73	55,295	-	-	-	-	-	-	79.18	0.043	0.079	410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CFL (18W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (20W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (23W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (25W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL (30W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
CFL, unknown	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Waterbed Mattress Pad	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
King	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Queen	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Double	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Single	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

**NE Iowa
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures**

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use				Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings													
											Spending on Materials & Labor (\$)						Average per Treated Household																	
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating				Summer kWh	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu				
OVERALL	113	113	66	45	4	0						28.2	23.5		168,551	334	33,720	24,202	1,296	0	6916.04	0.122	0.101		1,492	5,059	511	538	324	-				
Shell & Htg. Sys.	112	111	64	43	4	0	101	104				681,784	14.0	14,533	7.8	12,750	27,283	322	31,397	23,402	1,296	0	6087.36	0.138	0.075	123	246	5,023	491	544	324	-		
Wall Insul.	48	48	27	20	1	0	44	48				90,998	7.15	7,407	3.57	5,867	13,273	69	6,802	5,053	182	0	1895.80	0.162	0.074	122	277	2,574	252	253	182	-		
Ceiling Insul.	88	88	55	30	3	0	81	88				109,645	4.59	4,742	2.45	4,009	8,751	53	5,137	3,137	128	0	1245.97	0.057	0.028	46	99	0,957	93	105	43	-		
Infil. Reduction	105	97	62	39	3	0	96	1				110,659	2.37	2,457	0.47	776	3,233	61	5,957	3,937	486	0	1053.89	0.025	0.0470	776	33	0,985	96	101	162	-		
Found./Crawl. Insul.	29	29	13	16	0	0	28	29				37,373	-0.12	(72)	1.15	1,893	1,821	16	1,560	2,565	0	0	-0.04	(3)	0.040	65	63	1,239	120	160	-	-		
Bandjoist Insul.	25	25	15	8	2	0	-	25				5,215	0.00	0	0.12	205	205	2	245	145	26	0	208.59	-	0.005	8	8	0,166	16	18	13	-		
Hi-Eff Htg Sys Repl	52	0	32	20	0	0	-	0				275,547	0.00	0	0.00	0	0	109	10,704	7,429	0	0	5298.98	-	-	-	-	3,419	335	371	-	-		
Std-Eff Htg Sys Repl	11	0	4	4	3	0	-	0				52,027	0.00	0	0.00	0	0	10	991	1,136	474	0	4728.77	-	-	-	-	2,582	248	284	158	-		
Electric Htg Sys Repl	0	0	0	0	0	0	-	0				0	0	0.00	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-		
Other Htg Sys Repl	0	0	0	1	0	0	-	0				320	0.00	0	0.00	0	0	0	0	0	0	0	-	-	-	-	-	-	-	0	-	-		
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other	Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu					
Water Heating	102	39	49	14	0	0	82	22	46	14	0	0	42,966	0.0	0.2	22,353	12.4	2,324	800	0	0	421.24	0.000	0.006		573	0.254	47	57					
Temp. Reduct.	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
WH Wrap	5	3	2	0	0	0	0	0	0	0	0	0	125	0.00	0.00	1,443	0.1	46	0	0	0	25.00	0.000	0.001		481	0.066	23	-	-	-	-		
Pipe Insul.	95	36	47	12	0	0	298	0	0	0	0	0	298	0.00	0.01	7,081	1.5	514	144	0	0	3.14	0.000	0.000		197	0.032	11	12					
UF Showerhead	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
Faucet Aerator	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-		
Std-Eff Wtr Htr Repl.	18	8	3	7	0	0	36	16	6	14	0	0	19,875	0.00	0.14	10,992	1.6	257	656	0	0	1104.15	0.000	0.017		1,374	0.526	86	94					
Hi-Eff Wtr Htr Repl.	17	2	15	0	0	0	46	6	40	0	0	0	22,669	0.00	0.07	2,836	9.2	1,506	0	0	0	1333.45	0.000	0.035		1,418	0.615	100	-	-	-	-		
Lighting	91	91					406	406				0	0	2.5	4.6	23,736	-	-	-	-	-	18,688	0.027	0.051		261	-	-	-	-	-	-		
Capstyle (42W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
Capstyle (52W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
Capstyle (72W)	0	0					0	0				76	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
Capstyle, unknown	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
CFL (5W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
CFL (7W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
CFL (9W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
CFL (11W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
CFL (15W)	2	2					10	10				40	0.05	0.09	450	-	-	-	-	-	-	20.00	0.024	0.044		225	-	-	-	-	-	-		
CFL (18W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
CFL (20W)	65	65					284	284				1,136	1.63	3.02	15,560	-	-	-	-	-	-	17.48	0.025	0.046		239	-	-	-	-	-	-		
CFL (23W)	19	19					84	84				336	0.59	1.09	5,625	-	-	-	-	-	-	17.68	0.031	0.057		296	-	-	-	-	-	-		
CFL (25W)	8	8					28	28				112	0.22	0.41	2,101	-	-	-	-	-	-	14.00	0.028	0.051		263	-	-	-	-	-	-		
CFL (30W)	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
CFL, unknown	0	0					0	0				0	0.00	0.00	0	-	-	-	-	-	-	0.00	-	-		-	-	-	-	-	-	-		
Waterbed Mattress Pad	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0.0	0.0	0.0	0.00	-	-		-	-	-	-	-	-	-		
King	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0.0	0.0	0.0	0.00	-	-		-	-	-	-	-	-	-		
Queen	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0.0	0.0	0.0	0.00	-	-		-	-	-	-	-	-	-		
Double	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0.0	0.0	0.0	0.00	-	-		-	-	-	-	-	-	-		
Single	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0.0	0.0	0.0	0.00	-	-		-	-	-	-	-	-	-		
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0.0	0	0.0	0.0	0.0	0.00	-	-		-	-	-	-	-	-	-		
Refrigerator/Freezer	45	45					130	130				55,062	11.71	10.95	95,179	-	-	-	-	-	-	1223.60	0.260	0.243		2,115	-	-	-	-	-	-		
Refrigerator Remova	3	3					6	6				0	0.75	0.70	6,125	-	-	-	-	-	-	48.61	0.251	0.235		2,042	-	-	-	-	-	-		
Refrigerator Exchang	35	35					80	80				41,744	7.48	7.00	60,842	-	-	-	-	-	-	1192.69	0.214	0.200		1,738	-	-	-	-	-	-		
Freezer Remova	4	4					8	8				240	0.70	0.66	5,700	-	-	-	-	-	-	60.00	0.175	0.164		1,425	-	-	-	-	-	-		
Freezer Exchang	17	17					36	36				12,938	2.77	2.59	22,511	-	-	-	-	-	-	761.08	0.163	0.152		1,324	-	-	-	-	-	-		
Costs for Measures Without Energy Impacts Installed in 113 Total Households with Spending and/or Energy Impacts:																						643,727												
Total																																		
Unspecified Insul	81												44,664									551.40												
Duct Insulation													0									0.00												
Duct Sealing	4												1,525									381.17												
Damming Materia	0												0									0.00												
Htg. Sys. Tune & Clean	40												8,560									214.00												
Htg. Sys./WH Other	83												38,994									469.81												
Space Heater Repl	3												13,294									4427.92												
Air Conditioning Work	1												120									120.00												
Water Heater Repai	21												6,881									327.65												
Refrigerator Coil Clear	0												0									0.00												
Unspecified Utility Meas	0												0									0.00												
Asbestos Abatement	0																																	

New View
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

Measure	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings													
	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Electricity					Gas					Spending on Materials & Labor (\$)	Electricity					Gas										
										Summer kW	Winter kWh	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Summer kW	Winter kWh		Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu										
OVERALL	82	80	64	12	11	0			523,634	29.3		25.5		164,234	141	13,885	3,388	1,994	0		6385.78	0.186		0.156		2,053	2,199	217	282	181	-					
Shell & Htg. Sys.	81	80	58	12	11	0	74	80	454,785	14.8	16,821	7.3	11,676	28,497	138	13,132	3,341	1,994	0	5614.63	0.199	227	0.092	146	356	2,379	226	278	181	-						
Wall Insul.	40	40	32	2	6	0	35	40	72,444	5.56	6,415	3.03	4,838	11,253	39	3,701	206	434	0	1811.10	0.159	183	0.076	121	281	1,217	116	103	72	-						
Ceiling Insul.	67	67	48	10	9	0	61	67	102,416	7.67	8,709	2.13	3,400	12,109	24	2,268	510	275	0	1528.59	0.126	143	0.032	51	181	0,497	47	51	31	-						
Infl. Reduction	78	72	56	10	11	0	72	0	16,158	1.07	1,175	0.00	0	1,175	21	1,992	394	227	0	207.15	0.015	16	-	-	16	0,374	36	39	21	-						
Found./Crawl. Insul.	33	33	18	9	6	0	28	33	69,623	0.45	522	2.05	3,258	3,780	17	1,663	955	262	0	2109.78	0.016	19	0.062	99	115	0,971	92	106	44	-						
Bandjoist Insul.	22	22	14	3	5	0	-	22	2,751	0.00	0	0.11	179	179	1	92	20	24	0	125.03	-	-	-	8	8	0,069	7	7	5	-						
Hi-Eff Htg Sys Repl	19	0	11	4	4	0	-	0	99,901	0.00	0	0.00	0	0	18	1,727	628	400	0	5257.95	-	-	-	-	-	1,636	157	157	100	-						
Std-Eff Htg Sys Repl	23	0	14	4	5	0	-	0	91,493	0.00	0	0.00	0	0	18	1,689	627	373	0	3977.96	-	-	-	-	-	1,272	121	157	75	-						
Electric Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-						
Other Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-						
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other	Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu							
Water Heating	31	6	24	1	0	0	102	18	82	2	0	0	14,275	0.0	0.2	11,078	2.8	754	47	0	0	460.48	0.000	0.037	1,846	0.116	31	47	-	-						
Temp. Reduct.	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-						
WH Wrap	6	2	4	0	0	0	322	0	0	0	0	0	322	0.00	0.00	962	0.1	47	0	0	53.58	0.000	0.001	481	0.034	12	-	-	-	-						
Pipe Insul.	3	2	1	0	0	0	18	0	0	0	0	0	18	0.00	0.00	393	0.0	6	0	0	6.01	0.000	0.000	197	0.016	6	-	-	-	-						
LF Showerheac	14	4	10	0	0	0	28	8	20	0	0	0	385	0.00	0.19	8,288	0.8	252	0	0	27.51	0.000	0.047	2,072	0.082	25	-	-	-	-						
Faucet Aerator	19	4	15	0	0	0	54	10	44	0	0	0	400	0.00	0.03	1,434	0.2	52	0	0	21.06	0.000	0.008	359	0.011	3	-	-	-	-						
Std-Eff Wtr Htr Repl.	9	0	8	1	0	0	18	0	16	2	0	0	12,109	0.00	0.00	0	1.3	347	47	0	1345.46	-	-	-	0.166	43	47	-	-							
Hi-Eff Wtr Htr Repl.	1	0	1	0	0	0	2	0	2	0	0	0	1,041	0.00	0.00	0	0.3	51	0	0	1041.00	-	-	-	0.311	51	-	-	-	-						
Lighting	77	77					798	798					6,702	4.8	8.8	45,432	-	-	-	-	87.04	0.062	0.114	-	590	-	-	-	-	-						
Capsylite (42W)	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
Capsylite (52W)	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
Capsylite (72W)	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
Capsylite, unknown	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
CFL (5W)	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
CFL (7W)	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
CFL (9W)	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
CFL (11W)	1	1					24	24					240	0.05	0.10	522	-	-	-	-	240.00	0.055	0.101	522	-	-	-	-	-	-						
CFL (15W)	13	13					142	142					1,294	0.61	1.12	5,781	-	-	-	-	99.54	0.047	0.086	445	-	-	-	-	-	-						
CFL (18W)	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
CFL (20W)	21	21					172	172					1,352	0.95	1.75	9,020	-	-	-	-	64.38	0.045	0.083	430	-	-	-	-	-	-						
CFL (23W)	44	44					382	382					3,128	2.56	4.74	24,410	-	-	-	-	71.09	0.058	0.108	555	-	-	-	-	-	-						
CFL (25W)	12	12					78	78					688	0.60	1.11	5,699	-	-	-	-	57.33	0.050	0.092	475	-	-	-	-	-	-						
CFL (30W)	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
CFL, unknown	0	0					0	0	0	0	0	0	0	0.00	0.00	0	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-						
Waterbed Mattress Pad	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-						
King	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-						
Queen	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-						
Double	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-						
Single	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-						
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-						
Refrigerator/Freezer	42	42					94	94					47,872	9.74	9.11	79,227	-	-	-	-	1139.81	0.232	0.217	1,986	-	-	-	-	-	-						
Refrigerator Remova	1	1					2	2					50	0.25	0.23	2,042	-	-	-	-	50.00	0.251	0.235	2,042	-	-	-	-	-	-						
Refrigerator Exchang	42	42					86	86					47,234	8.98	8.40	73,011	-	-	-	-	1124.62	0.214	0.200	1,738	-	-	-	-	-	-						
Freezer Remova	2	2					4	4					100	0.35	0.33	2,850	-	-	-	-	50.00	0.175	0.164	1,425	-	-	-	-	-	-						
Freezer Exchang	1	1					2	2					488	0.16	0.15	1,324	-	-	-	-	488.00	0.163	0.152	1,324	-	-	-	-	-	-						
Costs for Measures Without Energy Impacts Installed in 82 Total Households with Spending and/or Energy Impacts:									354,055																											
Total													40,737										573.77													
Unspecified Insul	71																0.00										0.00									
Duct Insulation	0																0.00										0.00									
Duct Sealing	41																93.19										0.00									
Damming Materia	0																0.00										0.00									
Htg. Sys. Tune & Clean	36																52.31										0.00									
Htg. Sys./WH Other	25																524.73										0.00									
Space Heater Rsp	0																0.00										0.00									
Air Conditioning Work	0																0.00										0.00									
Water Heater Repai	1																7.66										0.00									
Refrigerator Coil Clear	0																0.00										0.00									
Unspecified Utility Meas	0																0.00										0.00									
Asbestos Abatement	0																0.00										0.00									
CO Detector	35																128.89										0.00									
Smoke Detector	15																180.40										0.00									
Fuses	0																																			

Threshold
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

Measure	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use				Spending on Materials & Labor (\$)	Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings																
	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Summer kW	Electricity			Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Electricity			Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu												
										Summer kW		Winter kW							Annual kWh	Summer kW	Winter kW						Annual kWh											
OVERALL	110	110	96	15	3	0			738,407	36.4		40.0		220,406	726	72,361	12,053	1,774	0	6712.79	0.171		0.170		2,004	7,564	754	804	591	-								
Shell & Htg. Sys.	110	110	92	14	3	0	88	110	626,951	16.5	17,554	17.0	27,633	45,187	712	69,176	11,788	1,774	0	5699.55	0.187	199	0.154	251	411	7,736	752	842	591	-								
Wall Insul.	93	93	79	11	3	0	72	93	236,890	11.93	12,660	8.22	13,393	26,053	300	29,170	4,438	702	0	2547.20	0.166	176	0.088	144	280	3,800	369	403	234	-								
Ceiling Insul.	102	102	84	14	3	0	80	102	144,584	3.46	3,723	7.07	11,508	15,232	111	10,751	2,034	305	0	1417.49	0.043	47	0.069	113	149	1,317	128	145	102	-								
Infl. Reduction	110	88	92	14	3	0	88	1	72,870	1.22	1,257	0.32	520	1,778	107	10,367	2,349	197	0	662.45	0.014	14	0.320	520	20	1,159	113	168	66	-								
Found./Crawl. Insul	33	33	30	2	1	0	27	33	20,163	-0.12	(87)	0.78	1,274	1,187	33	3,216	234	108	0	611.00	-0.004	(3)	0.024	39	36	1,101	107	117	108	-								
Bandjoist Insul.	60	60	51	7	1	0	-	60	6,196	0.00	0	0.58	938	938	10	932	139	14	0	103.27	-	-	0.010	16	16	0.188	18	20	14	-								
Hi-Eff Htg Sys Repl	34	0	28	5	1	0	-	0	122,002	0.00	0	0.00	0	0	132	12,814	2,594	249	0	3589.30	-	-	-	-	-	4,711	458	519	249	-								
Std-Eff Htg Sys Repl	5	0	4	0	1	0	-	0	22,724	0.00	0	0.00	0	0	15	1,427	0	199	0	4544.80	-	-	-	-	-	3,648	357	-	199	-								
Electric Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-								
Other Htg Sys Repl	1	0	1	0	0	0	-	0	1,522	0.00	0	0.00	0	0	5	500	0	0	0	1521.52	-	-	-	-	-	5,150	500	-	-	-	-							
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu		Summer kW	Winter kW	Annual kWh	Pk-Day therms	Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu								
Water Heating	107	15	87	5	0	0	60	6	50	4	0	0	31,566	0.0	0.0	0.0	7,116	14.5	3,185	265	0	0	295.01	0.000	0.003	474	0.166	37	53	-	-							
Temp. Reduct.	1	0	1	0	0	0							0	0.00	0.00	0.00	0	0.0	15	0	0	0	0.00	-	-	-	0.043	15	-	-	-							
WH Wrap	0	0	0	0	0	0							0	0.00	0.00	0.00	0	0.0	0	0	0	0.00	-	-	-	-	-	-	-	-	-							
Pipe Insul.	107	15	87	5	0	0							1,283	0.00	0.01	0.00	2,951	2.9	1,021	64	0	0	11.99	0.000	0.000	197	0.034	12	13	-	-							
LF Showerheac	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0	0	0.00	-	-	-	-	-	-	-	-	-							
Faucet Aerator	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0	0	0.00	-	-	-	-	-	-	-	-	-							
Std-Eff Wtr Htr Repl.	18	2	14	2	0	0	36	4	28	4	0	0	20,477	0.00	0.00	0.00	2,748	6.2	1,288	201	0	0	1137.59	0.000	0.000	1,374	0.443	92	101	-	-							
Hi-Eff Wtr Htr Repl.	9	1	8	0	0	0	24	2	22	0	0	0	9,806	0.00	0.04	0.00	1,418	5.3	851	0	0	0	1089.56	0.000	0.035	1,418	0.660	108	-	-	-	-						
Lighting	110	110					684	684	3,056	4.8		8.9	45,807	-	-	-	-	-	-	-	-	27.78	0.044		0.081	416	-	-	-	-	-	-						
Capsylite (42W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
Capsylite (52W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
Capsylite (72W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
Capsylite, unknown	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (5W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (7W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (9W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (11W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (15W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (18W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (20W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (23W)	110	110					684	684	3,056	4.81		8.89	45,807	-	-	-	-	-	-	-	-	27.78	0.044		0.081	416	-	-	-	-	-	-	-					
CFL (25W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL (30W)	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
CFL, unknown	0	0					0	0	0	0.00	0.00	0.00	0	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-						
Waterbed Mattress Pad	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-	-	-						
King	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-	-	-						
Queen	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-	-	-						
Double	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-	-	-						
Single	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-	-	-						
Unknown	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-	-	-						
Refrigerator/Freezer	56	56					150	150	76,834	15.04		14.06	122,285	-	-	-	-	-	-	-	-	1372.33	0.269		0.251	2												
Refrigerator Remova	3	3					6	6	200	0.75		0.70	6,125	-	-	-	-	-	-	-	-	66.67	0.251		0.235	2,042	-	-	-	-	-	-						
Refrigerator Exchange	53	53					108	108	60,753	11.33		10.60	92,133	-	-	-	-	-	-	-	-	1146.28	0.214		0.200	1,738	-	-	-	-	-	-						
Freezer Remova	2	2					4	4	130	0.35		0.33	2,850	-	-	-	-	-	-	-	-	65.00	0.175		0.164	1,425	-	-	-	-	-	-						
Freezer Exchange	16	16					32	32	15,751	2.61		2.44	21,187	-	-	-	-	-	-	-	-	984.43	0.163		0.152	1,324	-	-	-	-	-	-						
Costs for Measures Without Energy Impacts Installed in 110 Total Households with Spending and/or Energy Impacts:																																						
Total									596,579																													
Unspecified Insul	106								34,082													321.63																
Duct Insulation	0								0													0.00																
Duct Sealing	60								8,939																													

SCICAP
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings with Electricity						Average Estimated First Year Measure Cost and Savings Average per Treated Household															
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating				Summer kWh	Winter kWh	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kW	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu				
OVERALL	49	48	33	13	0	1						16.7	21.7		83,151	173	15,697	5,852	0	16	4530.02	0.303	0.315	1,732	5,256	476	450	-	16					
Shell & Htg. Sys.	48	46	32	13	0	1	30	44				192,200	11.0	10,789	15.6	23,034	33,823	173	15,570	5,824	0	16	4004.17	0.367	0.360	0.355	524	735	5,415	487	448	-	16	
Wall Insul.	27	27	21	4	0	0	15	26				21,304	3.61	3,452	5.33	7,844	11,296	39	3,494	611	0	0	789.03	0.241	0.230	0.205	302	418	1,850	166	153	-	-	
Ceiling Insul.	43	43	30	11	0	0	27	42				73,515	6.09	6,069	6.20	9,154	15,224	53	4,741	1,858	0	0	1709.66	0.226	0.225	0.148	218	354	1,764	158	169	-	-	
Infil. Reduction	47	31	32	12	0	1	30	0				14,015	0.98	976	2.56	3,737	4,713	26	2,304	457	0	16	298.19	0.033	0.33	2,562	3,737	152	0.798	72	36	-	-	16
Found./Crawl. Insul.	26	26	20																															

CASEI
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings Average per Treated Household									
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Summer kWh	Electricity Winter kW	Winter kWh	Annual kWh	Pk-Day therms	Gas Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity Winter kW	Winter kW	Annual kWh	Pk-Day therms	Gas Annual therms	Propane gallons	Fuel Oil gallons	Other Mbtu				
OVERALL	106	106	92	13	0	0			737,258	44.9	113.9		287,007	1,107	99,724	15,912	0	0	6955.26	0.231	0.593	2,708	12,028	1084	1224	-	-					
Shell & Htg. Sys.	106	106	87	13	0	0	105	103	661,348	32.9	37,664	98.1	143,780	181,444	1,091	95,766	15,455	0	0	6239.13	0.314	359	0.953	1,396	1,712	12,545	1101	1189	-	-		
Wall Insul.	89	89	76	8	0	0	88	89	154,369	16.41	18,907	41.22	60,416	79,323	363	31,865	3,668	0	0	1734.48	0.186	215	0.463	679	891	4,778	419	458	-	-		
Ceiling Insul.	100	100	85	10	0	0	99	100	118,319	15.27	17,353	14.77	21,655	39,008	153	13,463	1,820	0	0	1183.19	0.154	175	0.148	217	390	1,804	158	182	-	-		
Infil. Reduction	106	105	85	13	0	0	105	5	198,921	0.31	355	31.76	46,496	46,850	269	23,615	2,046	0	0	1876.62	0.003	3	6.351	9,299	446	3,169	278	157	-	-		
Found./Crawl. Insul.	39	39	31	6	0	0	39	39	21,736	0.93	1,049	9.36	13,717	14,766	59	5,180	2,093	0	0	557.34	0.024	27	0.240	352	379	1,906	167	349	-	-		
Bandjoist Insul.	23	23	17	2	0	0	-	23	2,525	0.00	0	1.02	1,497	1,497	3	272	32	0	0													

SIEDA
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

Measure	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Spending on Materials & Labor (\$)	Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings														
	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Summer kW	Electricity kWh	Winter kW	Annua kWh		Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kW	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu										
OVERALL	138	138	114	17	0	0			856,045	59.4	86.1		374,493	591	54,743	6,524	0	0	6203.23	0.210		0.301		2,714	5.183	480	384	-	-									
Shell & Htg. Sys.	138	135	112	15	0	0	126	129	711,086	36.8	42,083	56.6	83,322	125,405	574	50,837	6,317	0	0	5152.80	0.292	334	0.439	646	929	5,123	454	421	-	-								
Wall Insul.	74	74	66	7	0	0	68	74	71,803	12.69	14,753	8.64	12,708	27,461	143	12,710	1,259	0	0	970.31	0.187	217	0.117	172	371	2,170	193	180	-	-								
Ceiling Insul	111	111	91	14	0	0	102	111	155,181	19.18	21,719	17.82	26,233	47,952	91	8,056	1,347	0	0	1398.03	0.188	213	0.161	236	432	1,001	89	96	-	-								
Infl. Reduction	138	126	112	15	0	0	126	11	105,544	3.38	3,830	15.62	22,820	26,651	121	10,689	1,839	0	0	764.81	0.027	30	1.420	2,075	212	1,078	95	123	-	-								
Found./Crawl. Insul	48	48	40	5	0	0	45	48	26,993	1.55	1,781	12.73	18,948	20,730	34	2,978	439	0	0	562.35	0.034	40	0.265	395	432	0.838	74	88	-	-								
Bandjoist Insul.	99	99	83	11	0	0	-	99	20,484	0.00	0	1.76	2,612	2,612	10	890	135	0	0	206.91	-	-	0.018	26	26	0.121	11	12	-	-								
Hi-Elf Htg Sys Repl	45	0	45	0	0	0	-	0	220,908	0.00	0	0.00	0	0	137	12,148	0	0	0	4909.07	-	-	-	-	-	3,050	270	-	-	-								
Std-Elf Htg Sys Repl	22	0	14	8	0	0	-	0	100,960	0.00	0	0.00	0	0	38	3,367	1,298	0	0	4589.09	-	-	-	-	-	2,704	240	162	-	-								
Electric Htg Sys Repl	0	0	0	0	0	0	-	0	9,214	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-								
Other Htg Sys Repl	0	0	0	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-								
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other		Summer kW		Winter kW		Annua kWh		Pk-Day therms		Annua therms		Propane gallons		Fuel Oil gallons		Other Mbtu										
Water Heating	132	44	84	4	0	0	368	130	232	6	0	0		38,814	0.0	1.0		51,225	17.9	4,048		259	0	0	294.05	0.000	0.022	1,164	0.214	48	65	-	-					
Temp. Reduct.	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-							
WH Wrap	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0	0	0	0	0	0.00	-	-	-	-	-	-	-							
Pipe Insul.	126	43	79	4	0	0	0	0	1,520	0.00	0.02	0.00	0	8,458	2.1	712	39	0	0	12.06	0.000	0.000	197	0.026	9	10	-	-	-	-	-							
LF Showerheac	44	21	22	1	0	0	92	44	46	2	0	0	0	683	0.00	0.70	30,663	3.1	954	65	0	0	15.51	0.000	0.033	1,460	0.141	43	65	-	-							
Faucet Aerator	54	20	34	0	0	0	188	70	118	0	0	0	0	338	0.00	0.09	3,772	0.6	177	0	0	0	6.26	0.000	0.004	189	0.017	5	-	-	-							
Std-Elf Wtr Htr Repl.	22	4	16	2	0	0	44	8	32	4	0	0	0	21,052	0.00	0.10	5,496	5.6	1,131	154	0	0	956.91	0.000	0.025	1,374	0.352	71	77	-	-							
Hi-Elf Wtr Htr Repl.	15	2	13	0	0	0	44	8	36	0	0	0	0	15,222	0.00	0.07	2,636	6.6	1,075	0	0	0	1014.80	0.000	0.035	1,418	0.507	83	-	-	-							
Lighting	113	113					860	860		5,637	5.5	10.2		52,752	-	-	-	-	-	-	49.88	0.049		0.091		467	-	-	-	-	-							
Capsylite (42W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
Capsylite (52W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
Capsylite (72W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
Capsylite, unknown	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
CFL (5W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
CFL (7W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
CFL (9W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
CFL (11W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
CFL (15W)	44	44					324	324		2,106	1.50	2.76		14,247	-	-	-	-	-	-	47.86	0.034		0.063		324	-	-	-	-	-	-						
CFL (18W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
CFL (20W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
CFL (23W)	5	5					30	30		206	0.21	0.38		1,980	-	-	-	-	-	-	41.10	0.042		0.077		396	-	-	-	-	-	-						
CFL (25W)	80	80					506	506		3,325	3.84	7.09		36,524	-	-	-	-	-	-	41.57	0.048		0.089		457	-	-	-	-	-	-						
CFL (30W)	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
CFL, unknown	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
Waterbed Mattress Pad	4	4	3	1	0	0	16	8	6	2	0	0		112	0.00	2.32	6,130	-0.9	-142	-51.6	0.0	0.0	0.0	28.00	0.000	0.581	1,533	-0.287	-47	-52	-	-						
King	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-							
Queen	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-							
Double	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-							
Single	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0	0	0.00	0.00	0	0.0	0	0.0	0.0	0.0	0.00	-	-	-	-	-	-	-	-							
Unknown	4	4	3	1	0	0	16	8	6	2	0	0		112	0.00	2.32	6,130	-0.9	-142	-51.6	0.0	0.0	0.0	28.00	0.000	0.581	1,533	-0.287	-47	-52	-	-						
Refrigerator/Freezer	76	76					172	172		100,396	17.09	15.98		138,981	-	-	-	-	-	-	1321.06	0.225		0.210		1,829	-	-	-	-	-	-						
Refrigerator Remova	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
Refrigerator Exchang	67	67					134	134		84,830	14.33	13.39		116,470	-	-	-	-	-	-	1266.12	0.214		0.200		1,738	-	-	-	-	-	-						
Freezer Remova	0	0					0	0	0	0.00	0.00	0.00	0	0	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	-							
Freezer Exchange	17	17					38	38		15,566	2.77	2.59		22,511	-	-	-	-	-	-	915.65	0.163		0.152		1,324	-	-	-	-	-	-						
Costs for Measures Without Energy Impacts Installed in 138 Total Households with Spending and/or Energy Impacts:													556,506																									
Total													16,794													169.63												
Unspecified Insul	99											0						0.00																				
Duct Insulation	0											0						0.00																				
Duct Sealing	106											4,805						45.33																				
Damming Materia	0											0						0.00																				
Htg. Sys. Tune & Clean	63											12,852						204.00																				
Htg. Sys./WH Other	113											65,052	</																									

**Upper Des Moines
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures**

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings Average per Treated Household												
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Summer kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu							
OVERALL	140	139	139	1	0	0			1,139,781	57.1	46.4		264,565	949	96,042	858	0	0	8141.29	0.222	0.164		1,903	6.828	691	858	-	-							
Shell & Htg. Sys.	140	138	139	1	0	0	112	138	965,304	34.6	36.391	16.8	27,707	64,098	917	90,335	858	0	0	6895.03	0.309	0.325	0.122	201	464	6,597	650	858	-	-					
Wall Insul.	114	114	113	1	0	0	90	114	295,347	16.53	17.435	10.74	17,706	35,141	353	34,717	293	0	0	2590.76	0.184	0.194	0.094	155	308	3,120	307	293	-	-					
Ceiling Insul.	136	136	135	1	0	0	110	136	257,073	15.42	16.276	4.67	7,726	24,002	158	15,621	116	0	0	1890.25	0.140	0.148	0.034	57	176	1,171	116	116	-	-					
Infil. Reduction	134	108	133	1	0	0	108	0	33,036	2.20	2.308	0.00	0	2,308	107	10,541	43	0	0	248.53	0.020	0.21	-												

**West Central
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures**

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings									
													Average per Treated Household																			
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating			Spending on Materials & Labor (\$)	Summer kWh	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity kW	Winter kW	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu		
OVERALL	166	164	156	5	0	0					1,017,241	62.7		56.5		276,817	872	84,580	3,034	0	0	6127.96	0.267		0.235		1,688	5,587	542	607	-	-
Shell & Htg. Sys.	166	164	155	5	0	0	152	157			898,277	44.8	49,233	38.0	57,977	107,211	848	77,979	3,017	0	0	5411.31	0.295	324	0.242	369	654	5,470	503	603	-	-
Wall Insul.	115	115	110	3	0	0	105	114			178,115	16.44	18,150	11.04	16,964	35,114	234	21,509	555	0	0	1548.83	0.157	173	0.097	149	305	2,128	196	185	-	-
Ceiling Insul.	144	144	135	3	0	0	133	144			188,761	25.13	27,625	20.79	31,624	59,249	119	10,996	342	0	0	1310.84	0.189	208	0.144	220	411	0.885	81	114	-	-
Infil. Reduction	164	152	153	4	0	0	152	6			98,670	3.85	4,182	2.51	3,829	8,011	166	15,311	624	0	0	601.65	0.025	28	0.418	638	53	1,086	100	156	-	-
Found/Crawl. Insul	69	69	64	3	0	0	65	69			45,422	-0.63	(723)	2.96	4,480	3,757	44	4,031	140	0	0	569.30	-0.010	(11)	0.043	65	54	0.690	63	47	-	-
Bandjoist Insul	51	51	46	3	0	0	-	51			5,577	0.00	0	0.70	1,079	1,079	6	543	37	0	0	109.35	-	-	0.014	21	21	0.129	12	12	-	-
Hi-Eff Htg Sys Repl	59	0	57	2	0	0	-	0			261,579	0.00	0	0.00	0	0	195	17,896	811	0	0	4433.54	-	-	-	-	-	3,424	314	405	-	-
Std-Eff Htg Sys Repl	35	0	33	2	0	0	-	0			113,492	0.00	0	0.00	0	0	83	7,693	509	0	0	3242.63	-	-	-	-	-	2,509	233	254	-	-
Electric Htg Sys Repl	0	0	0	0	0	0	-	0			6,660	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	0	0	0	-	0			0	0.00	0	0.00	0	0	0	0	0	0	0	0.00	-	-	-	-	-	-	-	-	-	-
	Total	Electric	Gas	Propane	Fuel Oil	Other	Total	Electric	Gas	Propane	Fuel Oil	Other	Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu				
Water Heating	162	20	141	1	0	0	694	90	602	2	0	0	22,757	0.0	0.4	21,639	23.8	6,502	16	0	0	140.48	0.000	0.021	1,082	0.169	47	16	-	-	-	-
Temp. Reduct.	3	0	3	0	0	0							0.00	0.00	0	0.4	136	0	0	0	34.00	0.000	0.001	-	0.131	45	-	-	-	-	-	
WH Wrap	2	1	1	0	0	0							68	0.00	0.00	481	0.1	21	0	0	0	18.00	0.000	0.000	0.001	481	0.060	21	-	-	-	-
Pipe Insul.	132	15	116	1	0	0							1,483	0.00	0.01	2,951	3.3	1,140	11	0	0	11.24	0.000	0.000	0.000	197	0.028	10	11	-	-	
LF Showerhead	82	12	70	0	0	0	184	30	154	0	0	0	1,476	0.00	0.35	15,270	11.3	3,463	0	0	0	18.00	0.000	0.000	0.000	1,273	0.161	49	-	-	-	-
Faucet Aerator	129	16	112	1	0	0	476	60	414	2	0	0	1,233	0.00	0.07	2,937	2.3	710	6	0	0	9.56	0.000	0.000	0.004	184	0.021	6	6	-	-	
Std-Eff Wtr Htr Repl.	10	0	10	0	0	0	20	0	20	0	0	0	12,200	0.00	0.00	0	4.3	770	0	0	0	1220.00	-	-	-	-	0.425	77	-	-	-	-
Hi-Eff Wtr Htr Repl.	4	0	4	0	0	0	14	0	14	0	0	0	6,297	0.00	0.00	0	2.2	361	0	0	0	1574.26	-	-	-	-	0.553	90	-	-	-	-
Lighting	63	63					238	238					2,110	1.4	2.6	13,559	-	-	-	-	-	33.49	0.022	0.041	212	-	-	-	-	-	-	-
Capsy lite (42W)	3	3					6	6					54	0.02	0.03	154	-	-	-	-	-	18.00	0.005	0.010	51	-	-	-	-	-	-	-
Capsy lite (52W)	0	0					0	0					0	0.00	0.00	0	-	-	-	-	-	0.00	-	-	-	-	-	-	-	-	-	

Total Reported Materials, Labor, and Support Costs

Grand Total of Expenditures

**CAA Siouxland
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures**

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings Average per Treated Household																		
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating		Spending on Materials & Labor (\$)	Summer kWh	Electricity Winter kWh	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity Winter kW	kW	Annua kW	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity Winter kW	kW	Annua kW	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu		
OVERALL	106	106	96	5	3	0				709,309	70.1	68.3		332,868	645	62,216	3,771	1,290	0	6691.60	0.316	0.305		3,140	6,717	648		754	430	-											
Shell & Htg. Sys.	106	106	95	5	3	0	102	104		621,121	48.2	55,794	38.6	59,263	115,057	634	59,037	3,771	1,290	0	5859.63	0.472	547	0.371	570	1,085	6,673	621	754	430	-										
Wall Insul.	59	59	52	4	2	0	57	59		71,897	22.00	25,489	12.78	19,673	45,162	148	13,815	1,050	282	0	1218.59	0.386	447	0.217	333	765	2,854	266	262	141	-										
Ceiling Insul.	103	103	92	5	3	0	99	103		132,525	21.25	24,579	8.44	13,007	37,586	105	9,793	529	257	0	1286.65	0.215	248	0.082	126	365	1,143	106	1												

Polk County
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for All Measures

	Number of Households with Impacts						Count of Households with Electricity Impacts by End-Use						Estimated First-Year Savings										Average Estimated First Year Measure Cost and Savings Average per Treated Household															
Measure	Total	Electric	Gas	Propane	Fuel Oil	Other	Cooling	Heating	Spending on Materials & Labor (\$)	Summer kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu	Spending on Materials & Labor (\$)	Summer kW	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Propane gallons	Fuel Oil gallons	Other Mbtu
OVERALL	59	59	56	4	0	0			429,096	25.5	18.1		112,648	293	28,340	1,923	0	0	7272.81	0.275	0.194		1,909	5,239	506	481	-	-										
Shell & Htg. Sys.	59	59	55	4	0	0	59	59	352,998	15.8	17,900	6.9	10,568	28,468	280	25,584	1,773	0	0	5983.02	0.268	0.117	179	483	5,095	465	443	-	-									
Wall Insul.	43	43	42	1	0	0	43	43	96,667	4.39	4,955	4.04	6,174	11,130	91	8,361	256	0	0	2248.07	0.102	0.094	144	259	2,178	199	256	-	-									
Ceiling Insul.	55	55	51	4	0	0	55	55	56,575	9.25	10,504	1.73	2,639	13,142	35	3,179	440	0	0	1028.64	0.168	0.031	48	239	0,682	62	110	-	-									
Infl. Reduction	59	59	49	4	0	0	59	0	24,988	2.01	2,307	0.00	0	2,307	47	4,302	360	0	0	421.49	0.034	39	-	39	0,964	88	90	-	-									
Found./Crawl. Insul.	29	29	27	2	0	0	29	29	19,314	0.13	134	0.99	1,518	1,652	24	2,160																						

6. DETAILED SPENDING AND IMPACT PROFILES BY AGENCY FOR UTILITY EXPENDITURES

This section provides tables of spending and impacts by agency for utility expenditures.

Note that the same considerations for reporting at the agency level hold for this set of tables as for the ones in the previous section (see the discussion at the beginning of the previous section.) See notes regarding waterbed mattress pad and water heater measure savings at the beginning of Section 4.

**Community Opportunity
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures**

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Average Estimated First Year Measure Cost and Savings Average per Treated Household							
Measure	Total	Electric	Gas	Cooling	Heating		Summer kW	kWh	Electricity kW	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Spending on Materials & Labor (\$)	Summer kW	kWh	Electricity kW	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms
OVERALL	58	45	54			151,360	9.9		5.2		40,073	102	9,669	2609.65	0.144		0.066		891	1,886	179
Shell & Htg. Sys.	58	45	54	44	54	134,324	6.3	7,579	1.1	1,748	9,327	101	9,484	2315.92	0.143	172	0.021	32	207	1,874	176
Wall Insul.	35	31	28	28	16	28,358	1.72	2,077	0.55	859	2,937	30	2,770	810.24	0.062	74	0.034	54	95	1,055	99
Ceiling Insul	56	43	52	42	21	54,159	4.31	5,201	0.36	566	5,767	30	2,790	967.12	0.103	124	0.017	27	134	0.573	54
Infl. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Found./Crawl. Insul.	22	21	17	19	10	8,737	0.25	300	0.20	319	619	13	1,175	397.15	0.013	16	0.020	32	29	0.741	69
Bandjoist Insul.	3	2	3	-	2	384	0.00	0	0.00	4	4	0	15	128.04	-	-	0.001	2	2	0.054	5
Hi-Eff Htg Sys Repl	19	0	19	-	0	42,685	0.00	0	0.00	0	0	29	2,733	2246.58	-	-	-	-	-	1,530	144
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas	Summer kW		Winter kW	Annua kWh	Pk-Day therms	Annua therms		Summer kW		Winter kW		Annua kWh	Pk-Day therms	Annua therms	
Water Heating	33	0	33	1	0		649	0.0	0.0	-	0	0.7	185	19.67	-	-	-	-	0.020	6	
Temp. Reduct.	1	0	1				0	0.00	0.00	0	0.0	11	0.00	-	-	-	-	-	0.032	11	
WH Wrap	0	0	0				0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Pipe Insul.	33	0	33				188	0.00	0.00	0	0.4	136	5.70	-	-	-	-	-	0.012	4	
LF Showerhead	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Faucet Aerator	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Hi-Eff Wtr Htr Repl.	1	0	1	1	0	1	461	0.00	0.00	0	0.2	38	461.00	-	-	-	-	-	0.232	38	
Lighting	25	25		102	102		1,022	0.7	1.3	6,783	-	-	40.88	0.028	-	0.053	-	271	-	-	
Capsyite (42W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Capsyite (52W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Capsyite (72W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Capsyite, unknown	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (5W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (7W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (9W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (11W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (15W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (18W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (20W)	1	1		4	4		28	0.02	0.04	220	-	-	28.00	0.023	-	0.043	-	220	-	-	
CFL (23W)	24	24		98	98		994	0.69	1.27	6,563	-	-	41.42	0.029	-	0.053	-	273	-	-	
CFL (25W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (30W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL, unknown	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
King	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Queen	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Double	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Single	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Unknown	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Refrigerator/Freezer	26	26		29	29		15,365	2.95	2.76	23,964	-	-	590.96	0.113		0.106		922			
Refrigerator Removal	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Refrigerator Exchange	23	23		23	23		13,120	2.46	2.30	19,991	-	-	570.43	0.107		0.100		869			
Freezer Removal	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Freezer Exchange	6	6		6	6		2,245	0.49	0.46	3,973	-	-	374.17	0.081		0.076		662			
Costs for Measures Without Energy Impacts Installed in 58 Total Households with Spending and/or Energy Impacts:																					
Total						14,104															
Unspecified Insul.	0					0															
Duct Insulation	0					0															
Duct Sealing	0					0															
Damming Material	0					0															
Htg. Sys. Tune & Clean	0					0															
Htg. Sys./WH Other	0					0															
Space Heater Repl	0					0															
Air Conditioning Work	0					0															
Water Heater Repair	0					0															
Refrigerator Coil Clear	0					0															
Unspecified Utility Meas	0					0															
Asbestos Abatement	0					0															
CO Detector	0					0															
Smoke Detector	0					0															
Fuses	0					0															
Htg Sys Safety Check	0					0															
Exhaust Ventilator	0					0															
Health/Safety Repair	0					0															
Health/Safety Other	0					0															
Consumables	0					0															
Preservation	0					0															
Roof Repairs	0					0															
General Repairs	1					12															
Evaluator Labor	0					0															
Inspector Labor	0					0															
Eval/Insp Labor	0					0															
Meter Refrig (no action)	0					0															
Meter Freezer (no action)	0					0															
Support	27					14,092															
Landlord Contr Misc	0					0															
Landlord Contr Furnace	0					0															
Landlord Contr DHW	0					0															
Client Contr Misc	0					0															
Client Contr Refr	0					0															
Warehouse	0					0															
Unspecified	0					0															
Total Reported Materials, Labor, and Support Costs						165,463															
Grand Total of Expenditures						165,463															

HACAP
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Average Estimated First Year Measure Cost and Savings									
	Total	Electric	Gas	Cooling	Heating		Electricity			Gas Annua therms	Spending on Materials & Labor (\$)	Electricity			Gas Annua therms						
							Summer kW	kWh	Winter kWh			Summer kW	kWh	Winter kWh							
OVERALL	111	96	98			186,017	9.5		11.6	70,020	130	12,447	1675.77	0.054	0.060		729	1.326	127		
Shell & Htg. Sys.	103	83	95	76	95	161,308	2.7	3,242	1.3	1,968	5,209	127	11,676	1566.10	0.035	43	0.014	21	63	1.337	123
Wall Insul.	56	46	51	43	16	56,288	1.38	1,660	0.71	1,086	2,746	56	5,128	1005.13	0.032	39	0.045	68	60	1.096	101
Ceiling Insul	77	62	69	58	21	42,257	1.17	1,413	0.32	492	1,905	29	2,672	548.79	0.020	24	0.015	23	31	0.421	39
Infl. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Found./Crawl. Insul.	46	37	44	33	14	33,559	0.14	169	0.22	330	499	19	1,703	729.54	0.004	5	0.016	24	13	0.422	39
Bandjoist Insul.	41	15	41	-	15	3,853	0.00	0	0.04	59	59	3	238	93.97	-	-	0.003	4	4	0.063	6
Hi-Eff Htg Sys Repl	14	0	14	-	0	25,352	0.00	0	0.00	0	0	21	1,935	1810.86	-	-	-	-	-	1.493	138
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas	Summer kW	Winter kWh	Annua kWh	Pk-Day therms	Annua therms			Summer kW	Winter kWh	Annua kWh	Pk-Day therms	Annua therms			
Water Heating	62	10	52	116	21	95	3,417	0.0	0.1	3,701	3.0	771	55.11	0.000	0.008		370	0.057	15		
Temp. Reduct.	0	0	0				0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
WH Wrap	0	0	0				0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Pipe Insul.	27	3	24				162	0.00	0.00	295	0.3	113	6.00	0.000	0.000		98	0.014	5		
LF Showerhead	23	4	19	28	4	24	207	0.00	0.04	1,746	1.2	354	9.02	0.000	0.010		436	0.061	19		
Faucet Aerator	49	9	40	83	16	67	212	0.00	0.02	951	0.4	134	4.32	0.000	0.002		106	0.011	3		
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Hi-Eff Wtr Htr Repl.	5	1	4	5	1	4	2,836	0.00	0.02	709	1.0	169	567.20	0.000	0.018		709	0.260	42		
Lighting	90	90		965	965		8,306	4.3	7.9	40,851	-	-	92.29	0.048	0.088		454	-	-	-	-
Capsy lite (42W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Capsy lite (52W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Capsy lite (72W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Capsy lite, unknown	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (5W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (7W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (9W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (11W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (15W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (18W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (20W)	90	90		965	965		8,306	4.29	7.93	40,851	-	-	92.29	0.048	0.088		454	-	-	-	-
CFL (23W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (25W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL (30W)	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
CFL, unknown	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
King	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Queen	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Double	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Single	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Unknown	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Refrigerator/Freezer	23	23		26	26		12,979	2.49	2.33	20,259	-	-	564.32	0.108	0.101		881				
Refrigerator Removal	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Refrigerator Exchange	19	19		19	19		10,709	1.94	1.81	15,746	-	-	563.65	0.102	0.095	-	829				
Freezer Removal	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	-
Freezer Exchange	7	7		7	7		2,270	0.56	0.52	4,513	-	-	324.29	0.079	0.074	-	645				
Costs for Measures Without Energy Impacts Installed in 111 Total Households with Spending and/or Energy Impacts:																					
Total							28,828														
Unspecified Insul.	0						0						0.00								
Duct Insulation	0						0						0.00								
Duct Sealing	0						0						0.00								
Damming Material	0						0						0.00								
Htg. Sys. Tune & Clean	0						0						0.00								
Htg. Sys./WH Other	0						0						0.00								
Space Heater Repl	0						0						0.00								
Air Conditioning Work	0						0						0.00								
Water Heater Repair	0						0						0.00								
Refrigerator Coil Clean	0						0						0.00								
Unspecified Utility Meas	0						0						0.00								
Asbestos Abatement	0						0						0.00								
CO Detector	0						0						0.00								
Smoke Detector	0						0						0.00								
Fuses	0						0						0.00								
Htg Sys Safety Check	0						0						0.00								
Exhaust Ventilator	0						0						0.00								
Health/Safety Repair	0						0						0.00								
Health/Safety Other	0						0						0.00								
Consumables	0						0						0.00								
Preservation	0						0						0.00								
Roof Repairs	0						0						0.00								
General Repairs	7						1,450						207.07								
Evaluator Labo	0						0						0.00								
Inspector Labor	0						0						0.00								
Eval/Insp Labor	0						0						0.00								
Meter Refrig (no action)	0						0						0.00								
Meter Freezer (no action)	0						0						0.00								
Support	107						27,478						256.80								
Landlord Contr Misc	0						0						0.00								
Landlord Contr Furnace	0	</																			

TRAIN
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Average Estimated First Year Measure Cost and Savings							
Measure	Total	Electric	Gas	Cooling	Heating		Summer kW	Electricity kWh	Winter kWh	Annual kWh	Pk-Day therms	Gas Annual therms	Spending on Materials & Labor (\$)	Average per Treated Household					
														Summer kW	Electricity kWh	Winter kWh	Annual kWh	Pk-Day therms	Gas Annual therms
OVERALL	111	81	109			224,665	14.7	7.5		52,766	226	21,845	2024.01	0.090	0.038	651	2,077	200	
Shell & Htg. Sys.	110	79	108	72	108	207,661	11.9	14,329	3.6	5,487	19,816	217	19,568	1887.83	0.165	199	0.033	51	251
Wall Insul.	73	58	71	50	56	71,321	5.44	6,562	2.21	3,364	9,926	94	8,448	976.99	0.109	131	0.039	60	171
Ceiling Insul.	80	62	78	50	59	34,489	6.27	7,566	0.85	1,288	8,853	36	3,271	431.12	0.125	151	0.014	22	143
Infl. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-
Found./Crawl. Insul.	53	35	51	32	31	22,839	0.17	202	0.46	704	906	23	2,032	430.92	0.005	6	0.015	23	26
Bandjoist Insul.	50	38	50	-	38	4,849	0.00	0	0.09	132	132	3	310	96.98	-	-	0.002	3	3
Hi-Eff Htg Sys Repl	34	0	34	-	0	74,164	0.00	0	0.00	0	0	61	5,508	2181.28	-	-	-	-	6
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	1,794
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	162
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-
	Total	Electric	Gas	Number of Measures by Fuel Type			Summer kW	Winter kW		Annual kWh	Pk-Day therms	Annual therms		Summer kW	Winter kW		Annual kWh	Pk-Day therms	Annual therms
Water Heating	98	13	85	192	28	164	9,222	0.0	0.2	8,111	9.5	2,277	94.10	0.000	0.012		624	0.112	27
Temp. Reduct.	0	0	0				0	0.00	0.00	0	0.0	0	0.00	-	-		-	-	-
WH Wrap	17	1	16				289	0.00	0.00	241	0.5	177	17.00	0.000	0.000		241	0.032	11
Pipe Insul.	61	9	52				338	0.00	0.00	885	0.8	274	5.54	0.000	0.000		98	0.015	5
LF Showerhead	45	10	35	45	10	35	342	0.00	0.12	5,392	2.7	835	7.60	0.000	0.012		539	0.078	24
Faucet Aerator	78	11	67	129	17	112	351	0.00	0.02	885	0.7	207	4.49	0.000	0.002		80	0.010	3
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-		-	-	-
Hi-Eff Wtr Htr Repl.	18	1	17	18	1	17	7,903	0.00	0.02	709	4.8	783	438.03	0.000	0.018		709	0.282	46
Lighting	78	78		163	163		1,544	1.1	2.1	10,932	-	-	19.79	0.015	0.027		140	-	-
Capsyite (42W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
Capsyite (52W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
Capsyite (72W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
Capsyite, unknown	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL (5W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL (7W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL (9W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL (11W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL (15W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL (18W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL (20W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL (23W)	77	77		161	161		1,484	1.13	2.09	10,782	-	-	19.27	0.015	0.027		140	-	-
CFL (25W)	1	1		2	2		60	0.02	0.03	150	-	-	60.00	0.016	0.029		150	-	-
CFL (30W)	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
CFL, unknown	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-		-	-	-
King	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-		-	-	-
Queen	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-		-	-	-
Double	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-		-	-	-
Single	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-		-	-	-
Unknown	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-		-	-	-
Refrigerator/Freezer	16	16		16	16		6,238	1.71	1.60	13,907	-	-	389.88	0.107	0.100		869	-	-
Refrigerator Removal	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
Refrigerator Exchange	16	16		16	16		6,238	1.71	1.60	13,907	-	-	389.88	0.107	0.100		869	-	-
Freezer Removal	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
Freezer Exchange	0	0	0	0	0	0	0	0.00	0.00	0	-	-	0.00	-	-		-	-	-
Costs for Measures Without Energy Impacts Installed in 111 Total Households with Spending and/or Energy Impacts:																			
Total	40,744																		
Unspecified Insul.	0	0.00																	
Duct Insulation	0	0.00																	
Duct Sealing	10	57.22																	
Damming Material	0	0.00																	
Htg. Sys. Tune & Clean	0	0.00																	
Htg. Sys./WH Other	0	0.00																	
Space Heater Repl	0	0.00																	
Air Conditioning Work	0	0.00																	
Water Heater Repair	0	0.00																	
Refrigerator Coil Clear	0	0.00																	
Unspecified Utility Meas	0	0.00																	
Asbestos Abatement	0	0.00																	
CO Detector	0	0.00																	
Smoke Detector	0	0.00																	
Fuses	0	0.00																	
Htg Sys Safety Check	0	0.00																	
Exhaust Ventilator	0	0.00																	
Health/Safety Repair	0	0.00																	
Health/Safety Other	5	657																	
Consumables	0	131.42																	
Preservation	0	0.00																	
Roof Repairs	0	0.00																	
General Repairs	28	5,298																	
Evaluator Labor	0	0.00																	
Inspector Labor	0	0.00																	
Eval/Insp Labor	0	0.00																	
Meter Refrig (no action)	0	0.00																	
Meter Freezer (no action)	0	0.00																	
Support	111	34,216																	
Landlord Contr Misc	0	0.00																	
Landlord Contr Furnace	0	0.00																	
Landlord Contr DHW	0	0.00																	
Client Contr Misc	0	0.00																	
Client Contr Refr	0	0.00																	
Warehouse	0	0.00																	
Unspecified	0	0.00																	
Total Reported Materials, Labor, and Support Costs						265,409													
Grand Total of Expenditures						265,409													

MATURA
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts				Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Average Estimated First Year Measure Cost and Savings							
	Total	Electric	Gas		Cooling	Heating		Summer kW	Electricity kWh	Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kW	kWh	Annua kWh	Pk-Day therms	Gas Annua therms
Measure	Total	Electric	Gas		Cooling	Heating																
OVERALL	42	37	29				88,521	9.5		5.7	41,674	80	7,353	2,107.63	0.140	0.091		1,126	2,765	254		
Shell & Htg. Sys.	41	36	29		34	29	66,382	5.8	6,947	1.2	1,872	8,818	78	7,039	1619.07	0.169	204	0.043	65	245	2,699	243
Wall Insul.	26	23	17		23	14	7,404	1.86	2,248	0.56	849	3,097	22	1,979	284.79	0.081	98	0.040	61	135	1,294	116
Ceiling Insul	37	32	26		32	20	16,457	3.34	4,028	0.52	777	4,805	20	1,775	444.79	0.104	126	0.026	39	150	0,759	68
Inflr. Reductor	0	0	0		0	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-	-	-
Found./Crawl. Insul.	17	14	12		14	9	2,788	0.56	672	0.13	202	873	5	480	164.02	0.040	48	0.015	22	62	0,444	40
Bandjoist Insul.	14	11	14		-	11	485	0.00	0	0.03	43	43	1	85	34.64	-	-	0.003	4	4	0,067	6
Hi-Eff Htg Sys Repl	20	0	20		-	0	39,247	0.00	0	0.00	0	0	30	2,720	1962.35	-	-	-	-	-	1,512	136
Std-Eff Htg Sys Repl	0	0	0		-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0		-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0		-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-

MICA
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Average Estimated First Year Measure Cost and Savings							
	Total	Electric	Gas	Cooling	Heating		Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Annua therms		Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Annua therms	
OVERALL	57	55	56			137,474	6.8		11.1		49,687	113	11,494	2411.82	0.065	0.099		903	2.013	205	
Shell & Htg. Sys.	55	52	53	47	55	125,582	3.4	4,061	6.4	10,346	14,407	109	10,401	2283.31	0.072	86	0.117	188	277	2,055	
Wall Insul.	35	34	34	31	34	43,613	-0.01	(13)	3.18	5,112	5,099	46	4,383	1246.08	0.000	(0)	0.094	150	150	1,346	
Ceiling Insul	44	43	42	37	41	33,076	3.36	4,053	1.90	3,059	7,111	23	2,166	751.91	0.091	110	0.046	75	165	0,540	
Inflr. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	
Found./Crawl. Insul.	35	33	33	31	31	22,113	0.02	21	1.17	1,877	1,898	14	1,353	631.80	0.001	1	0.038	61	58	0,430	
Bandjoist Insul.	33	32	32	-	32	4,265	0.00	0	0.19	299	299	2	170	129.23	-	-	0.006	9	9	0,056	
Hi-Eff Htg Sys Repl	16	0	16	-	0	22,512	0.00	0	0.00	0	0	24	2,329	1407.01	-	-	-	-	-	1,531	
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	
	Total	Electric	Gas	Total	Electric	Gas	Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms		Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms				
Water Heating	53	4	49	100	6	94	2,519	0.0	0.1	5,390	3.8	1,093	47.54	0.000	0.030	1,347	0.078	22			
Temp. Reduct.	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
WH Wrap	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Pipe Insul.	42	2	40	186	0	0	186	0.00	0.00	197	0.5	168	4,442	0.000	0.000	-	98	0.012	4		
LF Showerhead	31	3	28	148	0	0	148	0.00	0.10	4,393	2.2	687	4,78	0.000	0.033	1,464	0.080	25			
Faucet Aerator	40	3	37	145	0	0	145	0.00	0.02	800	0.4	123	3.63	0.000	0.006	267	0.011	3			
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Hi-Eff Wtr Htr Repl.	3	0	3	2,040	0	0	2,040	0.00	0.00	0	0.7	115	680.10	-	-	-	-	0,236	38		
Lighting	53	53		303	303		1,044	1.4	2.6	13,542			19.69	0.027	0.050	256					
Capsytle (42W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Capsytle (52W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Capsytle (72W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Capsytle, unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (5W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (7W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (9W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (11W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (15W)	53	53	303	1,044	1.42	2.63	13,542	1.42	2.63	13,542	-	-	19.69	0.027	0.050	256	-	-	-	-	
CFL (18W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (20W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (23W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (25W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL (30W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
CFL, unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Waterbed Mattress Pad	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
King	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Queen	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Double	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Single	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-	
Refrigerator/Freezer	20	20		20	20		8,328	2.01	1.88	16,348	-	-	416.42	0.101	0.094	817					
Refrigerator Removal	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Refrigerator Exchange	15	15	15	15	15	15	6,787	1.60	1.50	13,038	-	-	452.50	0.107	0.100	869	-	-	-	-	
Freezer Removal	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-	
Freezer Exchange	5	5	5	5	5	5	1,541	0.41	0.38	3,310	-	-	308.19	0.081	0.076	662	-	-	-	-	
Costs for Measures Without Energy Impacts Installed in 57 Total Households with Spending and/or Energy Impacts:																					
Total							27,284														
Unspecified Insul.	0						0							0.00							
Duct Insulation	0						0							0.00							
Duct Sealing	0						0							0.00							
Damming Material	0						0							0.00							
Htg. Sys. Tune & Clean	0						0							0.00							
Htg. Sys./WH Other	0						0							0.00							
Space Heater Repl	0						0							0.00							
Air Conditioning Work	0						0							0.00							
Water Heater Repair	0						0							0.00							
Refrigerator Coil Clean	0						0							0.00							
Unspecified Utility Meas	0						0							0.00							
Asbestos Abatement	0						0							0.00							
CO Detector	0						0							0.00							
Smoke Detector	0						0							0.00							
Fuses	0						0							0.00							
Htg Sys Safety Check	0						0							0.00							
Exhaust Ventilator	0						0							0.00							
Health/Safety Repair	0						0							0.00							
Health/Safety Other	0						0							0.00							
Consumables	0						0							0.00							
Preservation	0						0							0.00							
Roof Repairs	0						0							0.00							
General Repairs	28						6,316							225.58							
Evaluator Labo	0						0							0.00							
Inspector Labor	0						0							0.00							
Eval/Insp Labor	0						0							0.00							
Meter Refrig (no action)	0						0							0.00							
Meter Freezer (no action)	0						0							0.00							
Support	57						20,968							367.86							
Landlord Contr Misc	0						0							0.00							
Landlord Contr Furnace	0						0							0.00							
Landlord Contr DHW	0						0							0.00							
Client Contr Misc	0						0							0.00							
Client Contr Refr	0						0							0.00							
Warehouse	0						0														

Mid-Sioux
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Average Estimated First Year Measure Cost and Savings								
	Total	Electric	Gas	Cooling	Heating		Summer		Electricity		Annual kWh	Pk-Day therms	Gas Annual therms	Spending on Materials & Labor (\$)	Average per Treated Household					
							kW	kWh	Winter kWh	kWh					Summer kW	Summer kWh	Winter kWh	Annual kWh	Pk-Day therms	Gas Annual therms
OVERALL	52	50	44			117,916	10.2		11.6		58,391	100	10,420	2267.61	0.120	0.126		1,168	2,280	237
Shell & Htg. Sys.	46	39	41	37	44	99,050	5.3	6,363	4.6	7,614	13,976	97	9,563	2,153.27	0.143	172	0.105	173	358	2,374
Wall Insul.	27	27	25	27	16	22,619	0.85	1,022	0.54	884	1,906	33	3,295	837.75	0.031	38	0.034	55	71	1,340
Ceiling Insul.	37	35	32	33	24	23,662	4.41	5,313	3.88	6,402	11,716	16	1,586	636.81	0.134	161	0.162	267	335	0,504
Infl. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-
Found./Crawl. Insul.	14	14	12	13	7	3,475	0.02	27	0.07	119	146	4	415	248.20	0.002	2	0.010	17	10	0,353
Bandjoist Insul.	12	8	11	-	8	793	0.00	0	0.13	209	209	1	79	66.06	-	-	0.016	26	26	0,073
Hi-Eff Htg Sys Repl	23	0	23	-	0	48,602	0.00	0	0.00	0	0	43	4,186	2,113.12	-	-	-	-	-	1,855
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas	Summer kW	Winter kWh	Annual kWh	Pk-Day therms	Annual therms		Summer kW	Winter kWh	Annual kWh	Pk-Day therms	Annual therms			
Water Heating	41	1	40	71	1	70	1,934	0.0	0.0		709	3.0	857	47.16	0.000	0.018		709	0.075	21
Temp. Reduct.	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
WH Wrap	3	0	3	0	0	0	51	0.00	0.00	0	0.1	37	17.00	-	-	-	-	0.036	12	-
Pipe Insul.	40	0	40	0	0	0	240	0.00	0.00	0	0.7	237	6.00	-	-	-	-	0.017	6	-
LF Showerhead	15	0	15	15	0	15	138	0.00	0.00	0	1.2	355	9.20	-	-	-	-	0.077	24	-
Faucet Aerator	30	0	30	53	0	53	146	0.00	0.00	0	0.4	118	4.87	-	-	-	-	0.013	4	-
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
Hi-Eff Wtr Htr Repl.	3	1	2	3	1	2	1,359	0.00	0.02	709	0.7	109	452.89	0.000	0.018	709	0.334	54	-	-
Lighting	47	47		476	476		3,554	2.5	4.7		24,067			75.62	0.054	0.099		512		
Capsyite (42W)	0	0		0	0		0	0.00	0.00	0	0	-	0	0.00	-	-	-	-	-	-
Capsyite (52W)	0	0		0	0		0	0.00	0.00	0	0	-	0	0.00	-	-	-	-	-	-
Capsyite (72W)	0	0		0	0		0	0.00	0.00	0	0	-	0	0.00	-	-	-	-	-	-
Capsyite, unknown	0	0		0	0		0	0.00	0.00	0	0	-	0	0.00	-	-	-	-	-	-
CFL (5W)	0	0		0	0		0	0.00	0.00	0	0	-	0	0.00	-	-	-	-	-	-
CFL (7W)	0	0		0	0		0	0.00	0.00	0	0	-	0	0.00	-	-	-	-	-	-
CFL (9W)	0	0		0	0		0	0.00	0.00	0	0	-	0	0.00	-	-	-	-	-	-
CFL (11W)	0	0		0	0		0	0.00	0.00	0	0	-	0	0.00	-	-	-	-	-	-
CFL (15W)	3	3		19	19		133	0.07	0.13	654	0	-	44.33	0.023	0.042	218	-	-	-	-
CFL (18W)	0	0		0	0		0	0.00	0.00	0	0	-	0.00	-	-	-	-	-	-	-
CFL (20W)	2	2		11	11		95	0.05	0.09	448	0	-	47.50	0.024	0.043	224	-	-	-	-
CFL (23W)	45	45		435	435		3,201	2.32	4.29	22,092	0	-	71.13	0.052	0.095	491	-	-	-	-
CFL (25W)	1	1		6	6		60	0.04	0.07	338	0	-	60.00	0.035	0.066	338	-	-	-	-
CFL (30W)	4	4		5	5		65	0.06	0.10	536	0	-	16.25	0.014	0.026	134	-	-	-	-
CFL, unknown	0	0		0	0		0	0.00	0.00	0	0	-	0.00	-	-	-	-	-	-	-
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
King	0	0		0	0		0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
Queen	0	0		0	0		0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
Double	0	0		0	0		0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
Single	0	0		0	0		0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
Unknown	0	0		0	0		0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
Refrigerator/Freezer	19	19		25	25		13,378	2.42	2.26		19,639	-	-	704.10	0.127	0.119		1,034		
Refrigerator Removal	0	0		0	0		0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-
Refrigerator Exchange	17	17		17	17		10,285	1.76	1.65	14,342	0	-	605.00	0.104	0.097	844	-	-	-	-
Freezer Removal	0	0		0	0		0	0.00	0.00	0	0	0	0.00	-	-	-	-	-	-	-
Freezer Exchange	8	8		8	8		3,093	0.65	0.81	5,297	0	-	386.63	0.081	0.076	662	-	-	-	-
Costs for Measures Without Energy Impacts Installed in 52 Total Households with Spending and/or Energy Impacts:																				
Total							20,514													
Unspecified Insul.	8						766							96.78						
Duct Insulation	0						0							0.00						
Duct Sealing	0						0							0.00						
Damming Material	0						0							0.00						
Htg. Sys. Tune & Clean	0						0							0.00						
Htg. Sys./WH Other	0						0							0.00						
Space Heater Repl	0						0							0.00						
Air Conditioning Work	0						0							0.00						
Water Heater Repair	0						0							0.00						
Refrigerator Coil Clear	0						0							0.00						
Unspecified Utility Meas	0						0							0.00						
Asbestos Abatement	0						0							0.00						
CO Detector	0						0							0.00						
Smoke Detector	0						0							0.00						
Fuses	0						0							0.00						
Htg Sys Safety Check	0						0							0.00						
Exhaust Ventilator	0						0							0.00						
Health/Safety Repair	0						0							0.00						
Health/Safety Other	1						40							40.12						
Consumables	0						0							0.00						
Preservation	0						0							0.00						
Roof Repairs	0						0							0.00						
General Repairs	26						4,517							173.75						
Evaluator Labo	0						0							0.00						
Inspector Labor	0						0							0.00						
Eval/Insp Labor	0						0							0.00						
Meter Refrig (no action)	0						0							0.00						
Meter Freezer (no action)	0						0							0.00						
Support	52						15,190							292.12						
Landlord Contr Misc	0						0							0.00						
Landlord Contr Furnace	0						0							0.00						
Landlord Contr DHW	0						0							0.00						
Client Contr Misc	0						0							0.00						
Client Contr Refr	0						0							0.00						

City of Des Moines
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Average Estimated First Year Measure Cost and Savings								
	Total	Electric	Gas	Cooling	Heating		Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	
OVERALL	89	89	89			196,160	12.5		11.6		67,983	269	24,492	2204.04	0.094	0.084	764	3.024	275	
Shell & Htg. Sys.	89	88	89	86	89	169,373	6.1	7,381	4.5	6,739	14,121	268	24,192	1903.07	0.071	86	0.050	76	160	
Wall Insul.	66	66	66	56	66	60,725	2.50	3,015	2.79	4,230	7,245	126	11,349	920.08	0.045	54	0.042	64	110	
Ceiling Insul	80	80	80	76	80	45,671	4.48	5,404	1.19	1,801	7,205	56	5,064	570.89	0.059	71	0.015	23	90	
Infl. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	
Found./Crawl. Insul.	30	30	30	30	30	9,289	-0.86	(1,037)	0.42	632	(405)	17	1,527	309.63	-0.029	(35)	0.014	21	(13)	
Bandjoist Insul.	23	23	23	-	23	1,976	0.00	0	0.05	75	75	2	159	85.91	-	-	0.002	3	3	
Hi-Eff Htg Sys Repl	29	0	29	-	0	51,712	0.00	0	0.00	0	0	67	6,093	1783.17	-	-	-	-	2,326	
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	
Water Heating	27	0	27	4	0	4	2,446	0.0	0.0	0	1.3	300	90.59	-	-	-	-	0.046	11	
Temp. Reduct.	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
WH Wrap	2	0	2	0	0	90	0.00	0.00	0.00	0	0.1	23	5.00	-	-	-	-	0.034	12	
Pipe Insul.	25	0	25	0	0	526	0.00	0.00	0.00	0	0.4	139	21.04	-	-	-	-	0.016	6	
LF Showerhead	1	0	1	1	0	1	0.00	0.00	0.00	0	0.1	19	10.00	-	-	-	-	0.063	19	
Faucet Aerator	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
Hi-Eff Wtr Htr Repl.	3	0	3	3	0	3	1,800	0.00	0.00	0	0.7	118	600.00	-	-	-	-	0.242	39	
Lighting	48	48		182	182	2,059	1.2		2.2	11,494	-	-	42.89	0.025		0.046	239	-	-	
Capsy lite (42W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
Capsy lite (52W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
Capsy lite (72W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
Capsy lite, unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL (5W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL (7W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL (9W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL (11W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL (15W)	19	19	58	58	58	551	0.26	0.48	0.48	2,452	-	-	28.97	0.014	-	0.025	129	-	-	
CFL (18W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL (20W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL (23W)	0	0	0	0	0	21	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL (25W)	44	44	124	124	124	1,487	0.95	1.75	1.75	9,042	-	-	33.89	0.022	-	0.040	205	-	-	
CFL (30W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
CFL, unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
Waterbed Mattress Pad	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
King	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
Queen	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
Double	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
Single	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
Unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	
Refrigerator/Freezer	48	48		51	51	22,282	5.21		4.87	42,369	-	-	464.21	0.109		0.102	883	-	-	
Refrigerator Removal	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
Refrigerator Exchange	47	47	47	47	47	21,139	4.93	4.61	4.61	40,120	-	-	449.77	0.105	-	0.098	854	-	-	
Freezer Removal	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	
Freezer Exchange	4	4	4	4	4	1,143	0.28	0.26	0.26	2,249	-	-	285.73	0.069	-	0.065	562	-	-	
Costs for Measures Without Energy Impacts Installed in 89 Total Households with Spending and/or Energy Impacts:																				
Total							29,412													
Unspecified Insul.	0												0.00							
Duct Insulation	0												0							
Duct Sealing	1					30							30.00							
Damming Material	0					0							0.00							
Htg. Sys. Tune & Clean	0					0							0.00							
Htg. Sys./WH Other	0					0							0.00							
Space Heater Repl	0					0							0.00							
Air Conditioning Work	0					0							0.00							
Water Heater Repair	0					0							0.00							
Refrigerator Coil Clear	0					0							0.00							
Unspecified Utility Meas	0					0							0.00							
Asbestos Abatement	0					0							0.00							
CO Detector	0					0							0.00							
Smoke Detector	0					0							0.00							
Fuses	0					0							0.00							
Htg Sys Safety Check	0					0							0.00							
Exhaust Ventilator	0					0							0.00							
Health/Safety Repair	0					0							0.00							
Health/Safety Other	0					0							0.00							
Consumables	0					0							0.00							
Preservation	0					0							0.00							
Roof Repairs	0					0							0.00							
General Repairs	6					208							34.63							
Evaluator Labo	0					0							0.00							
Inspector Labor	0					0							0.00							
Eval/Insp Labor	0					0							0.00							
Meter Refrig (no action)	0					0							0.00							
Meter Freezer (no action)	0					0							0.00							
Support	88					29,030							329.89							
Landlord Contr Misc	0					0							0.00							
Landlord Contr Furnace	0					0							0.00							
Landlord Contr DHW	0					0							0.00							
Client Contr Misc	0					0							0.00							
Client Contr Refr	0					0							0.00							
Warehouse	0					0							0.00							
Unspecified	1					144							144.00							
Total Reported Materials, Labor, and Support Costs							225,572													
Grand Total of Expenditures							225,572													

North Iowa
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Average Estimated First Year Measure Cost and Savings						
	Total	Electric	Gas	Cooling	Heating		Summer kW	Electricity		Annua kWh	Pk-Day therms	Gas Annua therms	Spending on Materials & Labor (\$)	Electricity		Annua kWh	Pk-Day therms	Gas Annua therms
								kWh	kWh					kW	kWh			
OVERALL	99	91	70			163,365	13.5		19.4	102,656	124	12,709	1650.15	0.080	0.125	1,128	1,776	182
Shell & Htg. Sys.	95	87	69	84	71	115,108	3.4	4,152	8.0	13,519	17,672	122	12,079	1211.67	0.041	49	0.113	190
Wall Insul.	50	46	39	42	34	34,297	1.99	2,396	4.61	7,748	10,144	48	4,810	685.94	0.047	57	0.136	228
Ceiling Insul	91	84	64	81	57	39,714	1.31	1,581	3.13	5,252	6,833	41	4,066	436.42	0.016	20	0.055	92
Infl. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-
Found./Crawl. Insul.	26	26	19	23	18	4,632	0.15	175	0.13	213	388	5	466	178.17	0.006	8	0.007	12
Bandjoist Insul.	25	21	24	-	21	1,600	0.00	0	0.18	306	306	2	161	64.02	-	-	0.009	15
Hi-Eff Htg Sys Repl	25	0	25	-	0	34,865	0.00	0	0.00	0	0	26	2,576	1394.58	-	-	-	-
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas	Summer kW	Winter kWh	Annua kWh	Pk-Day therms	Annua therms			Summer kW	Winter kWh	Annua kWh	Pk-Day therms	Annua therms
Water Heating	47	2	45	62	1	61	3,230	0.0	0.0	214	2.6	630	68.73	0.000	0.000	107	0.058	14
Temp. Reduct.	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
WH Wrap	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
Pipe Insul.	37	2	35				134	0.00	0.00	197	0.4	154	3.61	0.000	0.000	98	0.013	4
LF Showerhead	9	0	9	9	0	9	37	0.00	0.00	0	0.6	172	4.09	-	-	-	0.062	19
Faucet Aerator	33	1	32	47	1	46	72	0.00	0.00	17	0.3	86	2.18	0.000	0.000	17	0.009	3
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
Hi-Eff Wtr Htr Repl.	6	0	6	6	0	6	2,988	0.00	0.00	0	1.3	218	496.02	-	-	-	0.223	36
Lighting	82	82		526	526		4,046	2.2	4.0	20,584	-	-	49.34	0.026	0.049	251	-	-
Capsy lite (42W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
Capsy lite (52W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
Capsy lite (72W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
Capsy lite, unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (5W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (7W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (9W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (11W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (15W)	82	82		526	526		4,046	2.16	3.99	20,584	-	-	49.34	0.026	0.049	251	-	-
CFL (18W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (20W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (23W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (25W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL (30W)	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
CFL, unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	-	-	0.00	-	-	-	-	-
Waterbed Mattress Pad	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
King	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
Queen	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
Double	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
Single	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
Unknown	0	0	0	0	0	0	0.00	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-
Refrigerator/Freezer	62	62		82	82		40,981	7.90	7.38	64,187	-	-	660.98	0.127	0.119	1,036	-	-
Refrigerator Removal	3	3		3	3		65	0.38	0.35	3,063	-	-	21.87	0.126	0.117	1,021	-	-
Refrigerator Exchange	53	53		53	53		30,855	5.52	5.16	44,846	-	-	582.16	0.104	0.097	846	-	-
Freezer Removal	3	3		3	3		80	0.26	0.25	2,138	-	-	26.67	0.088	0.082	713	-	-
Freezer Exchange	23	23		23	23		9,981	1.74	1.63	14,141	-	-	433.95	0.076	0.071	615	-	-
Costs for Measures Without Energy Impacts Installed in 100 Total Households with Spending and/or Energy Impacts:																		
Total	40,372																	
Unspecified Insul.	0	0																
Duct Insulation	0	0.00																
Duct Sealing	0	0.00																
Damming Material	0	0.00																
Htg. Sys. Tune & Clean	0	0.00																
Htg. Sys./WH Other	0	0.00																
Space Heater Repl	0	0.00																
Air Conditioning Work	0	0.00																
Water Heater Repair	0	0.00																
Refrigerator Coil Clean	0	0.00																
Unspecified Utility Meas	0	0.00																
Asbestos Abatement	0	0.00																
CO Detector	0	0.00																
Smoke Detector	0	0.00																
Fuses	0	0.00																
Htg Sys Safety Check	0	0.00																
Exhaust Ventilator	0	0.00																
Health/Safety Repair	0	0.00																
Health/Safety Other	0	0.00																
Consumables	0	0.00																
Preservation	0	0.00																
Roof Repairs	0	0.00																
General Repairs	36	9,004																
Evaluator Labor	0	0.00																
Inspector Labor	0	0.00																
Eval/Insp Labor	0	0.00																
Meter Refrig (no action)	0	0.00																
Meter Freezer (no action)	0	0.00																
Support	94	31,368																
Landlord Contr Misc	0	0.00																
Landlord Contr Furnace	0	0.00																
Landlord Contr DHW	0	0.00																
Client Contr Misc	0	0.00																
Client Contr Refr	0	0.00																
Warehouse	0	0.00																
Unspecified	0	0.00																
Total Reported Materials, Labor, and Support Costs							203,737											
Grand Total of Expenditures							203,737											

[illegible]

New View
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts				Count of Households with Electricity Impacts by End-Use				Estimated First-Year Savings				Average Estimated First Year Measure Cost and Savings														
	Total			Gas	Cooling		Heating		Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kW	kWh	Annual kWh	Gas Annual therms	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kW	kWh	Annual kWh	Gas Annual therms					
Measure	Total	Electric	Gas																								
OVERALL	58	50	42						70,621	7.8		4.9		40,610		23	2,196		1217.61	0.081	0.054	812	0.547	52			
Sheli & Htg. Sys.	57	48	42		42	42			56,701	4.1	4,906	0.0	0	4,906		23	2,171		994.76	0.085	102	0.000	0	102	0.543	52	
Wall Insul.	23	22	16		22	0			12,181	1.62	1,959	0.00	0	1,959		7	673		529.62	0.074	89	-	-	89	0.442	42	
Ceiling Insul.	46	39	32		39	0			24,602	2.29	2,758	0.00	0	2,758		8	741		534.83	0.059	71	-	-	71	0.244	23	
Inflr. Reductor	23	1	23		1	1	0		1,536	0.01	11	0.00	0	11		3	305		86.80	0.008	11	-	-	11	0.140	13	
Found./Crawl. Insul.	21	18	4		18	0			8,937	0.15	179	0.00	0	179		1	139		425.55	0.008	10	-	-	10	0.366	35	
Bandjoist Insul.	8	0	8		-	0			445	0.00	0	0.00	0	0		0	26		55.63	-	-	-	-	-	0.035	3	
Hi-Eff Htg Sys Repl	9	0	9		-	0			9,000	0.00	0	0.00	0	0		3	286		1000.00	-	-	-	-	-	0.331	32	
Std-Eff Htg Sys Repl	0	0	0		-	0			0	0.00	0	0.00	0	0		0	0		0.00	-	-	-	-	-	-	-	
Electric Htg Sys Repl	0	0	0		-	0			0	0.00	0	0.00	0	0		0	0		0.00	-	-	-	-	-	-	-	
Other Htg Sys Repl	0	0	0		-	0			0	0.00	0	0.00	0	0		0	0		0.00	-	-	-	-	-	-	-	
	Total	Electric	Gas		Total	Electric	Gas			Summer kW		Winter kW		Annual kWh		Pk-Day therms	Annual therms			Summer kW		Winter kW		Annual kWh		Pk-Day therms	Annual therms
Water Heating	5	4	1		7	6	1		662	0.0		0.1		3,040		0.2	25		132.35	0.000		0.016		760	0.156	25	
Temp. Reduct.	0	0	0						0	0.00		0.00		0	0.0	0		0.00	-	-	-	-	-	-	-	-	
WH Wrap	0	0	0						0	0.00		0.00		0	0.0	0		0.00	-	-	-	-	-	-	-	-	
Pipe Insul.	2	2	0						9	0.00		0.00		197	0.0	0		4.51	0.000		0.000		98	-	-	-	
F Showerhead	2	2	0		2	2	0		67	0.00		0.05		2,243	0.0	0		33.70	0.000		0.025		1,122	-	-	-	
Faucet Aerator	3	3	0		4	4	0		65	0.00		0.01		600	0.0	0		21.62	0.000		0.005		200	-	-	-	
Std-Eff Wtr Htr Repl.	1	0	0		0	0	0		0	0.00		0.00		0	0.0	0		0.00	-	-	-	-	-	-	-	-	
Hi-Eff Wtr Htr Repl.	1	0	1		1	0	1		521	0.00		0.00		0	0.2	25		520.50	-	-	-	-	-	0.156	25		
Lighting	45	45			248	248			2,034	1.4		2.6		13,548	-	-		45.2									

Threshold
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Average Estimated First Year Measure Cost and Savings								
	Total	Electric	Gas	Cooling	Heating		Summer kW	kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Annua therms	Spending on Materials & Labor (\$)	Summer kW	kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Annua therms	
OVERALL	50	46	45			101,653	5.0		5.9		32,643	118	11,759	2033.07	0.060		0.063		710	2,618	261	
Shell & Htg. Sys.	48	42	45	34	45	87,163	2.0	2,365	2.2	3,578	5,944	115	11,182	1815.90	0.058	70	0.049	80	142	2,557	248	
Wall Insul.	42	39	40	27	37	44,962	1.60	1,932	1.61	2,632	4,564	69	6,677	1070.51	0.059	72	0.044	71	117	1,717	167	
Ceiling Insul	41	37	38	23	34	19,996	0.37	446	0.42	686	1,131	18	1,707	487.71	0.016	19	0.012	20	31	0.462	45	
Inflr. Reductor	3	0	3	0	0	242	0.00	0	0.00	0	0	0	33	80.65	-	-	-	-	-	0.114	11	
Found./Crawl. Insul.	12	10	11	7	9	3,355	-0.01	(12)	0.11	173	161	5	461	279.55	-0.001	(2)	0.012	19	16	0.431	42	
Bandjoist Insul.	21	19	21	-	19	650	0.00	0	0.05	88	88	2	193	30.96	-	-	0.003	5	5	0.095	9	
Hi-Eff Htg Sys Repl	11	0	11	-	0	17,959	0.00	0	0.00	0	0	22	2,111	1632.61	-	-	-	-	-	1.977	192	
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-	
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-	
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-	
	Total	Electric	Gas	Total	Electric	Gas	Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms		Summer kW	Winter kW	Annua kWh	Pk-Day therms	Annua therms					
Water Heating	44	3	41	8	1	7	3,858	0.0	0.0		1,004	2.7	577	87.68	0.000		0.006		335	0.067	14	
Temp. Reduct.	1	0	1				0	0.00	0.00		0	0.0	7	0.00	-	-	-	-	-	0.021	7	
WH Wrap	0	0	0				0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Pipe Insul.	44	3	41				264	0.00	0.00		296	0.7	241	6.00	0.000		0.000		98	0.017	6	
LF Showerhead	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Faucet Aerator	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Hi-Eff Wtr Htr Repl.	8	1	7	8	1	7	3,594	0.00	0.02		709	2.0	329	449.26	0.000		0.018		709	0.288	47	
Lighting	46	46		138	138		626	1.0	1.8		9,242			13.60	0.021		0.039		201			
Capsy lite (42W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
Capsy lite (52W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
Capsy lite (72W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
Capsy lite, unknown	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (5W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (7W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (9W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (11W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (15W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (18W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (20W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (23W)	46	46		138	138		626	0.97	1.79		9,242	-	-	13.60	0.021		0.039		201	-	-	
CFL (25W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL (30W)	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
CFL, unknown	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
King	0	0		0	0		0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Queen	0	0		0	0		0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Double	0	0		0	0		0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Single	0	0		0	0		0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Unknown	0	0		0	0		0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-	
Refrigerator/Freezer	19	19		19	19		10,006	2.02	1.89		16,454	-	-	526.66	0.107		0.100		866	-	-	
Refrigerator Removal	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
Refrigerator Exchange	19	19		19	19		10,006	2.02	1.89		16,454	-	-	526.66	0.107		0.100		866	-	-	
Freezer Removal	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
Freezer Exchange	0	0		0	0		0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-	
Costs for Measures Without Energy Impacts Installed in 50 Total Households with Spending and/or Energy Impacts:																						
Total						9,748																
Unspecified Insul.	0					0																
Duct Insulation	0					0																
Duct Sealing	0					0																
Damming Material	0					0																
Htg. Sys. Tune & Clean	0					0																
Htg. Sys./WH Other	0					0																
Space Heater Repl	0					0																
Air Conditioning Work	0					0																
Water Heater Repair	0					0																
Refrigerator Coil Clear	0					0																
Unspecified Utility Meas	0					0																
Asbestos Abatement	0					0																
CO Detector	0					0																
Smoke Detector	0					0																
Fuses	0					0																
Htg Sys Safety Check	0					0																
Exhaust Ventilator	0					0																
Health/Safety Repair	0					0																
Health/Safety Other	0					0																
Consumables	0					0																

SCICAP
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Average Estimated First Year Measure Cost and Savings							
	Total	Electric	Gas	Cooling	Heating		Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Annua therms	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Annua therms		
Measure	Total	Electric	Gas	Cooling	Heating																
OVERALL	27	21	25			45,549	2.7	2.0	12,081	52	4,692	1686.99	0.145	0.063		575	2,081	188			
Shell & Htg. Sys.	25	19	25	12	25	40,128	1.9	2,255	1.1	1,663	3,918	52	4,679	1605.12	0.156	188	0.043	67	206	2,080	187
Wall Insul.	18	13	18	7	13	6,954	0.88	821	0.42	641	1,463	17	1,498	386.32	0.097	117	0.032	49	113	0.925	83
Ceiling Insul	24	19	24	12	19	18,606	1.16	1,403	0.47	720	2,124	20	1,757	775.26	0.097	117	0.025	38	112	0.815	73
Infl. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Found./Crawl. Insul.	15	10	15	6	10	5,671	0.03	31	0.17	267	298	7	603	378.10	0.004	5	0.017	27	30	0.447	40
Bandjoist Insul.	14	11	14	-	11	351	0.00	0	0.02	34	34	1	72	25.11	-	-	0.002	3	3	0.057	5
Hi-Eff Htg Sys Repl	5	0	5	-	0	8,545	0.00	0	0.00	0	0	8	749	1709.00	-	-	-	-	-	1,659	150
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
							</														

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use			Spending on Materials & Labor (\$)	Estimated First-Year Savings						Gas Annuua therms	Spending on Materials & Labor (\$)	Average Estimated First Year Measure Cost and Savings Averge per Treated Household						
Measure	Total	Electric	Gas	Cooling	Heating			Summer kW	kWh	Electricity Winter kW	kWh	Annuua kWh	Pk-Day therms			Annuua therms	Summer kW	kWh	Electricity Winter kW	kWh	Annuua kWh	Pk-Day therms
OVERALL	92	87	62				145,146	15.4		34.6		88,123	280	25,009	1,577.68	0.103	0.253		1,013	4,516	403	
Shell & Htg. Sys.	84	79	59	76	64		130,406	12.0	14,516	30.0	44,004	58,520	275	24,171	1552.45	0.158	191	0.469	688	741	4,661	410
Wall Insul.	77	72	53	70	49		51,502	6.18	7,456	18.74	27,450	34,906	125	11,014	668.85	0.088	107	0.382	560	485	2,365	208
Ceiling Insul.	83	78	58	75	54		34,732	5.47	6,601	6.65	9,738	16,338	55	4,862	418.46	0.073	88	0.123	180	209	0.954	84
Inflr. Reductor	0	0	0	0	0		0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
F Found.Crawl. Insul.	33	32	19	31	17		5,201	0.38	459	4.16	6,095	6,554	16	1,441	157.61	0.012	15	0.245	359	205	0.862	76
Bandjoist Insul.	14	14	10	-	14		809	0.00	0	0.49	722	722	1	74	57.78	-	-	0.035	52	52	0.084	7
Hi-Eff Htg Sys Repl	24	0	24	-	-		38,162	0.00	0	0.00	0	0	77	6,781	1590.07	-	-	-	-	-	3,215	283
Sld-Eff Htg Sys Repl	0	0	0	-	-		0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	-		0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	-		0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
	Total	Electric	Gas	Total	Electric	Gas		Summer kW		Winter kW		Annuua kWh	Pk-Day therms	Annuua therms		Summer kW		Winter kW		Annuua kWh	Pk-Day therms	Annuua therms
Water Heating	23	1	22	16	0	16	6,425	0.0		0.0		98	5.0	838	279.33	0.000		0.000		98	0.226	38
Temp. Reduct.	0	0	0				0	0.00		0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
WH Wrap	0	0	0				0	0.00		0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Pipe Insul.	9	1	8				17	0.00		0.00		98	0.2	53	1.89	0.000		0.000		98	0.019	7
F Showerhead	0	0	0	0	0	0	0	0.00		0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Faucet Aeraloi	0	0	0	0	0	0	0	0.00		0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Sld-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00		0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Hi-Eff Wtr Htr Repl.	16	0	16	16	0	16	6,408	0.00		0.00		0	4.8	784	400.48	-	-	-	-	-	0.300	49
Lighting	72	72		371	371		1,216	1.6		2.9		14,895	-	-	16.89	0.022		0.040		207	-	-
Capsylite (42W)	0	0	0	0	0	0	0	0.00		0.00		0	-	-	0.00	-	-	-	-	-	-	-
Capsylite (52W)	0	0	0	0	0	0	0	0.00														

SIEDA
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Average Estimated First Year Measure Cost and Savings							
Measure	Total	Electric	Gas	Cooling	Heating		Summer kW	kWh	Winter kW	kWh	Annual kWh	Pk-Day therms	Gas Annual therms	Spending on Materials & Labor (\$)	Summer kW	kWh	Winter kW	kWh	Annual kWh	Pk-Day therms	Gas Annual therms
OVERALL	59	54	45			123,585	9.9		8.6		53,203	78	7,395	2094.67	0.101		0.084		985	1.738	164
Shell & Htg. Sys.	49	45	43	39	44	95,869	5.6	6,730	3.7	5,491	12,221	74	6,600	1956.50	0.143	173	0.085	125	272	1,729	153
Wall Insul.	27	26	24	25	17	9,148	2.19	2,646	0.56	839	3,484	20	1,817	338.80	0.088	106	0.033	49	134	0.852	76
Ceiling Insul	41	38	37	36	25	25,319	3.12	3,764	0.54	797	4,562	18	1,590	617.53	0.087	105	0.022	32	120	0.484	43
Inflr. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Found./Crawl. Insul.	13	12	11	12	7	2,812	0.27	320	2.55	3,755	4,075	3	264	216.30	0.022	27	0.364	536	340	0.270	24
Bandjoist Insul.	33	24	33	-	24	3,178	0.00	0	0.07	100	100	2	175	96.32	-	-	0.003	4	4	0.060	5
Hi-Eff Htg Sys Repl	24	0	24	-	0	55,412	0.00	0	0.00	0	0	31	2,755	2308.83	-	-	-	-	-	1,293	115
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-

Upper Des Moines
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Average Estimated First Year Measure Cost and Savings							
	Total	Electric	Gas	Cooling	Heating		Summer kW	kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms
Measure	Total	Electric	Gas	Cooling	Heating		Summer kW	kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annua kWh	Pk-Day therms	Gas Annua therms
OVERALL	68	42	66			193,513	4.9		4.0	24,765	148	15,129	2845.77	0.130	0.053		590	2,245	229
Shell & Htg. Sys.	66	39	65	28	65	170,127	2.7	3,245	1.7	2,771	6,016	143	14,241	2577.68	0.096	116	0.026	43	154
Wall Insul.	51	35	49	22	24	51,565	1.52	1,830	1.18	1,954	3,784	59	5,894	1011.09	0.069	83	0.049	81	108
Ceiling Insul.	63	37	61	22	27	45,497	1.15	1,365	0.36	599	1,984	27	2,664	722.17	0.052	63	0.013	22	54
Inflr. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-
Found./Crawl. Insul.	20	12	19	8	10	4,865	0.02	30	0.11	188	218	7	708	243.26	0.003	4	0.011	19	18
Bandjoist Insul.	26	8	26	-	8	1,198	0.00	0	0.02	29	29	2	184	46.07	-	-	0.002	4	4
Hi-Eff Htg Sys Repl	37	0	37	-	0	67,001	0.00	0	0.00	0	0	48	4,792	1810.85	-	-	-	-	-
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	-	-	-	-	-	-

West Central
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Average Estimated First Year Measure Cost and Savings Average per Treated Household										
	Total	Electric	Gas	Cooling	Heating		Summer kW	kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Annua therms	Spending on Materials & Labor (\$)	Summer kW	kWh	Electricity Winter kW	kWh	Annua kWh	Pk-Day therms	Annua therms			
OVERALL	113	73	105			185,978	11.2		3.8	35,351	174	17,397	1645.82	0.117		0.029		484	1.655	166				
Shell & Htg. Sys.	108	68	101	66	101	168,826	8.5	10,210	1.0	1,514	11,725	167	15,402	1563.21	0.128	155	0.010	15	172	1.655	152			
Wall Insul.	81	53	73	50	20	43,518	3.55	4,282	0.57	878	5,160	65	5,941	537.26	0.071	86	0.028	44	97	0.884	81			
Ceiling Insul.	90	62	83	60	22	48,498	5.04	6,083	0.28	431	6,515	34	3,133	538.88	0.084	101	0.013	20	105	0.409	38			
Infil. Reductor	25	0	25	0	0	3,198	0.00	0	0.00	0	0	8	729	127.93	-	-	-	-	-	0.312	29			
Found./Crawl. Insul.	41	24	35	24	9	12,400	-0.13	(154)	0.12	183	29	11	1,038	302.44	-0.005	(6)	0.013	20	1	0.324	30			
Bandjoist Insul.	24	7	24	-	7	1,077	0.00	0	0.01	22	22	2	141	44.87	-	-	0.002	3	3	0.064	6			
Hi-Eff Htg Sys Repl	33	0	33	-	0	60,134	0.00	0	0.00	0	0	48	4,419	1822.25	-	-	-	-	-	1.457	134			
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-			
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-			
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	-			
	Total	Electric	Gas	Total	Electric	Gas	Summer kW	Winter kWh	Annua kWh	Pk-Day therms	Annua therms		Summer kW	Winter kWh	Annua kWh	Pk-Day therms	Annua therms		Summer kW	Winter kWh	Annua kWh	Pk-Day therms	Annua therms	
Water Heating	98	4	94	193	7	186	2,606	0.0	0.0	990	6.6	1,995	26.59	0.000	0.003		248	0.070	21					
Temp. Reduct.	2	0	2				0	0.00	0.00	0	0.2	55	0.00	-	-	-	-	-	0.079	27				
WH Wrap	2	1	1				34	0.00	0.00	241	0.0	10	17.00	0.000	0.000		241	0.030	10					
Pipe Insul.	75	3	72				408	0.00	0.00	295	1.0	354	5.43	0.000	0.000		98	0.014	5					
LF Showerhead	52	2	50	57	2	55	425	0.00	0.00	188	4.1	1,260	8.17	0.000	0.002		94	0.082	25					
Faucet Aerator	77	4	73	133	5	128	340	0.00	0.01	267	0.7	225	4.41	0.000	0.002		67	0.010	3					
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-				
Hi-Eff Wtr Htr Repl.	3	0	3	3	0	3	1,400	0.00	0.00	0	0.6	92	466.67	-	-	-	-	-	0.187	31				
Lighting	26	26		53	53		482	0.3	0.6	2,994	-	-	18.54	0.012	0.022		115	-	-	-				
Capsyite (42W)	2	2		2	2		17	0.01	0.01	50	-	-	8.50	0.003	0.005		25	-	-	-				
Capsyite (52W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
Capsyite (72W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
Capsyite, unknown	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
CFL (5W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
CFL (7W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
CFL (9W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
CFL (11W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
CFL (15W)	5	5		15	15		141	0.07	0.12	630	-	-	28.20	0.013	0.024		126	-	-	-				
CFL (18W)	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
CFL (20W)	7	7		17	17		152	0.09	0.17	887	-	-	21.71	0.013	0.025		127	-	-	-				
CFL (23W)	11	11		11	11		92	0.08	0.14	737	-	-	8.36	0.007	0.013		67	-	-	-				
CFL (25W)	4	4		6	6		60	0.05	0.09	450	-	-	15.00	0.012	0.022		113	-	-	-				
CFL (30W)	2	2		2	2		20	0.03	0.05	240	-	-	10.00	0.013	0.023		120	-	-	-				
CFL, unknown	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-				
King	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-				
Queen	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-				
Double	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-				
Single	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-				
Unknown	0	0	0	0	0	0	0	0.00	0.00	0	0.0	0	0.00	-	-	-	-	-	-	-				
Refrigerator/Freezer	24	24		25	25		14,063	2.42	2.26	19,643	-	-	586.97	0.101	0.094		818	-	-	-				
Refrigerator Removal	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
Refrigerator Exchange	18	18		18	18		11,416	1.87	1.75	15,210	-	-	634.23	0.104	0.097		845	-	-	-				
Freezer Removal	0	0		0	0		0	0.00	0.00	0	-	-	0.00	-	-	-	-	-	-	-				
Freezer Exchange	7	7		7	7		2,647	0.55	0.51	4,433	-	-	378.16	0.078	0.073		633	-	-	-				
Costs for Measures Without Energy Impacts Installed in 114 Total Households with Spending and/or Energy Impacts:																								
Total							28,767																	
Unspecified Insul.	0						0							0.00										
Duct Insulation	0						0							0.00										
Duct Sealing	0						817							0.00										
Damming Material	0						0							0.00										
Htg. Sys. Tune & Clean	0						0							0.00										
Htg. Sys./WH Other	0						0							0.00										
Space Heater Repl	0						0							0.00										
Air Conditioning Work	0						0							0.00										
Water Heater Repair	0						0							0.00										
Refrigerator Coil Clear	0						0							0.00										
Unspecified Utility Meas	0						0							0.00										

CAA Siouxland
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

Measure	Number of Households with Impacts			Count of Households with Electricity Impacts by End-Use		Spending on Materials & Labor (\$)	Estimated First-Year Savings					Gas		Average Estimated First Year Measure Cost and Savings Average per Treated Household							
	Total	Electric	Gas	Cooling	Heating		Summer kW	Electricity kWh	Winter kWh	Annual kWh	Pk-Day therms	Annual therms	Spending on Materials & Labor (\$)	Summer kW	Electricity kWh	Winter kWh	Annual kWh	Pk-Day therms	Annual therms		
OVERALL	80	76	69			122,499	16.7		18.3		83,519	113	11,168	1531.24	0.128		0.132	1,099	1.637	162	
Shell & Htg. Sys.	76	73	67	62	69	104,492	11.9	14,380	11.3	17,400	31,780	110	10,244	1374.90	0.192	232	0.164	252	435	1,641	
Wall Insul.	36	35	30	30	30	17,838	5.63	6,784	5.30	8,136	14,921	37	3,408	495.49	0.188	226	0.177	271	426	1,220	
Ceiling Insul	75	72	66	53	65	36,661	5.46	6,582	2.59	3,996	10,578	32	2,997	488.81	0.103	124	0.040	61	147	0.488	
Infil. Reductor	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	
Found./Crawl. Insul.	20	20	15	17	17	11,959	0.84	1,014	3.27	5,009	6,023	10	952	597.94	0.049	60	0.192	295	301	0.681	
Bandjoist Insul.	22	22	21	-	22	2,227	0.00	0	0.17	259	259	2	142	101.20	-	-	0.008	12	12	0.073	
Hi-Eff Htg Sys Repl	17	0	17	-	0	35,808	0.00	0	0.00	0	0	29	2,746	2106.35	-	-	-	-	-	1.733	
Std-Eff Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	
Electric Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	
Other Htg Sys Repl	0	0	0	-	0	0	0.00	0	0.00	0	0	0	0	0.00	-	-	-	-	-	-	
	Total	Electric	Gas	Number of Measures by Fuel Type			Summer kW		Winter kW		Annual kWh	Pk-Day therms	Annual therms		Summer kW		Winter kW		Annual kWh	Pk-Day therms	Annual therms
Water Heating	66	12	54	25	7	18	1,725	0.0	0.2		9,283	3.0	925	26.14	0.000		0.013		774	0.055	17
Temp. Reduct.	0	0	0				0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
WH Wrap	20	6	14				324	0.00	0.00		1,443	0.5	163	16.19	0.000		0.000		241	0.034	12
Pipe Insul.	66	12	54				358	0.00	0.00		1,180	0.9	299	5.42	0.000		0.000		98	0.016	6
LF Showerhead	22	5	17	23	6	17	139	0.00	0.14		5,951	1.3	412	6.31	0.000		0.027		1,190	0.079	24
Faucet Aerator	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Std-Eff Wtr Htr Repl.	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Hi-Eff Wtr Htr Repl.	2	1	1	2	1	1	905	0.00	0.02		709	0.3	51	452.52	0.000		0.018		709	0.311	51
Lighting	57	57		408	408		3,580	2.5	4.7		24,246	-	-	62.80	0.045		0.083		425	-	-
Capsy lite (42W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Capsy lite (52W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Capsy lite (72W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Capsy lite, unknown	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (5W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (7W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (9W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (11W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (15W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (18W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (20W)	29	29	86	86	86	86	714	0.42	0.78		4,019	-	-	24.62	0.015	0.027	-	139	-	-	-
CFL (23W)	51	51	280	280	280	280	2,292	1.65	3.05		15,738	-	-	44.95	0.032	0.060	-	309	-	-	-
CFL (25W)	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
CFL (30W)	31	31	42	42	42	42	573	0.47	0.87		4,490	-	-	18.50	0.015	0.028	-	145	-	-	-
CFL, unknown	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Waterbed Mattress Pad	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
King	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Queen	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Double	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Single	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Unknown	0	0	0	0	0	0	0	0.00	0.00		0	0.0	0	0.00	-	-	-	-	-	-	-
Refrigerator/Freezer	21	21		23	23		12,702	2.24	2.09		18,209	-	-	604.86	0.107		0.100		867	-	-
Refrigerator Removal	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Refrigerator Exchange	17	17		17	17		10,763	1.76	1.65		14,334	-	-	633.12	0.104		0.097		843	-	-
Freezer Removal	0	0	0	0	0	0	0	0.00	0.00		0	-	-	0.00	-	-	-	-	-	-	-
Freezer Exchange	6	6		6	6		1,939	0.48	0.45		3,875	-	-	323.17	0.079		0.074		646	-	-
Costs for Measures Without Energy Impacts Installed in 80 Total Households with Spending and/or Energy Impacts:																					
Total						12,441															
Unspecified Insul.	0						0							0.00							
Duct Insulation	0						0							0.00							
Duct Sealing	0						0							0.00							
Damming Material	0						0							0.00							
Htg. Sys. Tune & Clean	0						0							0.00							
Htg. Sys./WH Other	0						0							0.00							
Space Heater Repl	0						0							0.00							
Air Conditioning Work	0						0							0.00							
Water Heater Repair	0						0							0.00							
Refrigerator Coil Clear	0						0							0.00							
Unspecified Utility Meas	0						0							0.00							
Asbestos Abatement	0						0							0.00							
CO Detector	0						0							0.00				</			

Polk County
Calendar Year 2004 Estimates
Costs, Fuel, and Demand Impacts for Utility-Funded Measures

	Number of Households with Impacts				Count of Households with Electricity Impacts by End-Use			
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APPENDIX A -- CLIENT CHARACTERISTICS

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Household characteristics													
Quarterly gross income	\$2,305	\$2,338	\$2,455	\$2,655	\$2,693	\$2,759	\$2,987	\$2,834	\$3,285	\$3,488	\$3,282	\$3,363	\$3,649
Average members			2.9	2.8	2.7	2.7	2.7	2.5	2.5	2.6	2.6	2.6	2.8
Percentage of households with:													
Elderly		9.5	29.2	34.8	35.8	37.2	37.9	40.7	42.0	42.4	42.5	38.9	36.3
Handicapped		7.2	25.7	30.6	34.0	37.1	36.8	41.6	44.0	49.6	47.6	47.3	42.0
Young children		18.7	14.6	20.1	22.1	19.3	20.1	17.8	18.0	18.0	NA	15.8	9.7
Housing type (%)													
Single family home	84.2	88.0	88.7	87.9	87.7	90.3	88.5	85.0	92.0	91.3	92.4	92.9	91.2
Mobile home	6.3	4.7	5.3	5.4	6.6	5.6	6.9	8.4	7.0	7.4	7.4	5.8	8.1
Duplex	1.7	2.6	3.1	1.9	2.7	1.6	1.2	2.6	0.0	1.3	0.0	0.4	0.7
Three+ unit apartment	5.1	4.5	1.9	1.3	0.4	0.8	0.9	1.3	0.0	0.0	0.1	0.9	0.2
Rent a room	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown/other	2.0	0.1	1.1	3.5	2.6	1.7	2.6	2.6	1.0	0.0	0.0	0.0	0.0
Heating system type (%)													
Natural gas	72.4	70.7	75.0	76.1	80.0	82.4	80.7	81.1	81.0	85.2	84.5	85.5	84.0
Propane	14.5	14.3	15.4	13.7	13.4	11.8	13.6	11.9	14.0	11.2	11.8	11.4	12.2
Fuel oil	5.3	5.8	5.1	4.3	3.3	3.8	2.1	2.1	3.0	1.9	1.4	1.4	1.9
Electricity	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.2	85.5	1.9
Other	7.7	9.1	4.4	5.9	3.3	2.0	3.5	4.8	2.0	0.1	0.0	0.0	0.2
Air conditioning type (%)													
Central	25.5	23.1	21.6	24.7	27.6	30.5	32.9	31.6	39.0	40.0	41.6	44.1	48.4
Room	30.3	29.3	42.5	41.3	44.6	41.3	43.9	45.7	46.0	46.4	44.5	39.4	42.4
None	44.2	47.6	34.6	34.0	27.8	28.3	23.2	22.7	16.0	13.6	13.9	16.5	9.4
Blower door readings (average cfm50)													
Pre	3,710	3,370	3,455	3,521	3,595	3,487	3,403	3,356	3,191	3,531	3,555	3,642	3,733
Post	2,174	2,164	2,296	2,296	2,334	2,337	2,261	2,377	2,443	2,302	2,341	2,348	2,355

APPENDIX B – METHODOLOGY FOR ASSESSING SAVINGS FOR WATER HEATER REPLACEMENTS

Energy savings from replacing water heaters

In 2002, the utilities began funding for increases to the efficiency of the replacement water heaters. This prompted us to consider a more direct assignment of savings for water heater replacements. We see two benefits from assigning direct savings estimates to water heater replacements: 1) the savings for utility-funded boosts to efficiency of the replacement units will be directly quantified, and, 2) we should see lower uncertainty in our estimated savings since the replacement water heater savings will be credited to the specific houses that received new water heaters rather than spreading those savings across all households.

Beginning in January 2004, appliance efficiency standards were amended to reflect higher minimum efficiencies (Federal Register, Vol. 66, No. 11). The analysis described here was modified to reflect those changes. In addition, we developed specific savings algorithms for electric water heater replacements which are also funded by utilities in the Iowa WAP.

Energy savings from water heater replacements

Water heater replacement savings are derived from two major factors: 1) replacing existing units with units of higher-efficiency, and 2) replacing existing scale-encrusted units with new units having no scale.

In its publication Non-Chemical Technologies for Scale and Hardness Control (DOE/EE-0162), DOE reports that scale buildup on the heated surface in water heaters has a significant impact on the burner efficiency. The following table shows the increases in energy consumption for various degrees of scaling.

Scale Thickness (inches)	Increased Energy Consumption (%)
1/32	8.5
1/16	12.4
1/8	25
1/4	40

Unfortunately, we have no data on the scale thickness typically found in old water heaters in Iowa. A review of the water hardness in various cities in Iowa as well as in the Mississippi and Missouri Rivers indicate that surface as well as subsurface sources of tap water are considered to be 'hard' to 'very hard'. Water supplied by larger municipalities is typically softened during treatment, but often not to a degree that assures little or no scaling of pipes or water heaters will occur. Based upon the review of water hardness in Iowa, we can assume that some scaling is likely to exist on old water heaters.

Given the lack of actual data, we are left with the dubious task of picking a reasonable thickness of scale. Note that any reasonable estimate of savings is probably better than none at all, as in the current algorithms. Furthermore, for natural gas customers, we conduct annual billing analyses so any error in our estimates are essentially trued-up across the agencies and state. So,

we have opted for a middle-of-the-range estimate: we assume an increased consumption due to scale formation slightly greater than 1/16", or 15%.

Our analysis and results is shown in the following table:

Assessment of First-Year Gross Savings From Water Heater Replacements						
	Electric			Gas		
Typical size (gals):	65			40		
Baseline consumption:	4,048 KWH/year			231 Therms/yr		
Baseline scale formation factor:	15%			15%		
Baseline heat delivered:	2,972 KWH/year			109 Therms/yr		
	1991 Stds	2004 Stds	WAP Hi-Eff Std	1991 Stds	2004 Stds	WAP Hi-Eff Std
Energy Factor	0.84	0.88	0.89	0.54	0.59	0.62
	4,048	3,361	3,339	231	184	176
Gross Savings From Replacement:		687	709 KWH		47	55 Therms

Notes:

Baseline scale formation factor refers to the increased energy consumption due to scale formation on existing water heaters

Baseline heat delivered is calculated by backing out losses due to the energy factor and scale formation, leaving energy actually delivered to the water

Baseline consumption is taken from Global Energy Partners characterization of energy use in the low-income sector, pre-1978 construction, with the gas baseline adjusted from an energy factor of 0.52 to 0.54

Gross first year savings for electric water heater replacements are 687 kWh/year for standard efficiency replacements, and 709 kWh/year for higher-efficiency replacements.

Gross first year savings for gas water heater replacements are 47 therms/year for standard efficiency replacements and 55 therms/year for higher-efficiency replacements.

